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ABSTRACT

In 1990, North Country Community College (NCCC) in New York developed an outcome assessment plan as a response to a requirement of the State University of New York. The planning process began in summer 1989 with an inventory of current assessment processes and a review of their effectiveness. A new plan was then developed, reviewed, and refined. This document includes a description of the planning process; reports on NCCC's progress in meeting its assessment goals in the areas of basic skills, general education, specialized transfer and career majors, and social and personal development; and goals and recommendations for 1990-1994 with respect to the same areas. The bulk of the document consists of a report prepared by the General Education Task Force providing recommendations for the assessment of general education. The report focuses on: (1) representative approaches to general education and general education at NCCC; (2) course-embedded assessment measures; (3) general tests of student knowledge and competence; (4) general education competencies in the areas of literacy, writing, speaking, reading, using computers, critical thinking, active learning, quantitative reasoning, independent acquisition of knowledge/research, intuitive and imaginative processes, ethnical and moral principles, sensitivity to other cultures, and content areas; (5) curricular recommendations; (6) selection of courses for assessment; (7) 5-year time line; and (8) concerns regarding validity. A 50-item bibliography is attached. (DJD)

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OUTCOME ASSESSMENT PLAN

NORTH COUNTRY COMMUNITY COLLEGE

JUNE 1990

Office of the Dean of Academic and Student Affairs
Dr. Gail Rogers Rice, Ed.D.
Sandra Pope

TC 920126

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OUTCOME ASSESSMENT PLAN

NORTH COUNTRY COMMUNITY COLLEGE

INTRODUCTION

North Country Community College has engaged in an exploration of appropriate processes for responding to the request to assess learning outcomes (as outlined in **Guidelines for Undergraduate Assessment**, December, 1988) and presently is in the second year of structuring an outcomes assessment process consistent with the needs of North Country Community College and the guidelines provided.

North Country Community College's Campus Assessment Committee is composed of the following:

Dr. Gail Rogers Rice, Dean of Academic and Student Affairs, liaison for assessment

Dr. Douglas Wilmes, Chair of the Humanities/Social Science Division

Mr. Melvin Chambers, Chair of the Allied Health/Math/Science Division

Dr. Ross Dailey, Chair of the Business, Recreation and Human Service Division

Ms. Donna Condon, Director of the Ticonderoga/Elizabethtown Campuses

Dr. Robert Karp, Assistant Dean/Director of Institutional Research and Records

Ms. Patricia Randolph-Clark, Associate Professor of Nursing and Chair of NCCC Curriculum Committee

Mr. Donald Morgan, Associate Professor of Social Science/ Director of the Community Mental Health Assistant Program

Ms. JoAnn Branch, Associate Professor of Physical Education and Director of Learning/Advisement Center, Saranac Lake Campus

Chair of the North Country Community College Assembly (for 1989 - 1990, Ms. Jane Beamish, Associate Professor of Business and Office Technology)

Zeanna Reyome, Student Member, served for the academic year 1989 - 1990

New Student Member(s) will be appointed for 1990 - 1991

In addition to the Assessment Committee, a Task Force was designated for each area. They were charged with making specific recommendations to the Assessment Committee regarding their particular area. Where possible, Assessment Committee Members with experience in a particular area met with or served on the task forces. The task force members were:

General Education Task Force

JoAnn Branch, Associate Professor of Physical Education and Director of Learning/Advisement Center, Saranac Lake Campus

Kenneth Wiley, Professor of Art

Donald Morgan, Associate Professor of Social Science/Director of Community Mental Health Assistant Program

Dr. Joseph Spadaro, Professor of Chemistry

Dr. Douglas Wilmes, Chair of the Humanities/Social Science Division

Social and Personal Development Task Force

Susanne Badore, Personal Counselor/Assistant Professor

Wiley Kulia, Director, Malone Branch Campus

Francis Reich, Director of Student Services and Counseling

Jack Drury, Associate Professor/Director of Wilderness Recreation Leadership Program

Louise Marks, Associate Professor of Sociology/Psychology, Ticonderoga Branch Campus

Dr. Laurence Spraggs, Director of Continuing Education

Basic Skills Task Force

JoAnn Branch, Chair, Associate Professor of Physical Education and Director of Learning/Advisement Center, Saranac Lake Campus

Jeannine Golden, Assistant Professor of Communications/Reading, Malone Campus

Richard Boutelle, Director of Instructional and Media Services

Walter Lender, Student Services Coordinator, Ticonderoga Campus

Specialized Major: Transfer and Career Programs

Jane Beamish, Associate Professor of Business and Office Technology

Roberta Bernstein, Career Planning/Transfer/Placement Counselor

Patricia Randolph-Clark, Associate Professor of Nursing

Ross Dailey, Chair of the Business/Recreation/Human Services Division

Jack Drury, Associate Professor/Director of Wilderness Recreation Leadership Program

Paul Monagan, Chair, Associate Professor/Director of Radiologic Technology Program

Assessment Committee discussion and activity has centered on and will continue to examine the following:

1. Deepening understanding and commitment to the long term assessment project
    a. Disseminating information on assessment
    b. Discussing comprehensive outcome assessment processes
    c. Examining varied outcome assessment models
    d. Examining projected goals for efficacy
    e. Amending old or adding new processes as assessment process continues
2. Insuring college-wide participation
3. Updating an inventory of current NCCC assessment processes
4. Exploring the suitability of established current assessment processes
5. Developing new assessment processes where needed

6. Integrating current and new assessment processes for long term use, within the context of NCCC needs and SUNY guidelines

7. Linking assessment processes to stated mission and goals

8. Assuring appropriate data collection, review and use

9. Choosing appropriate statistical analysis processes

10. Refining the outcome assessment plan over the period 1990 - 1994

The intent of the Assessment Committee is to engage in a continuous process of exploration, planning, implementation and adjustment of assessment processes over the period 1990 - 1994 and to engage increasing numbers of staff and students in this process.

North Country Community College's consultation process for Outcome Assessment Plan review and approval will be the same as that taken for any major, college-wide practice or policy. When a preliminary draft is completed by the committee, this will be presented to the College Assembly for review and commentary; it will then be sent to the Office of Dean of Academic and Student Affairs for review and commentary; the Assessment Committee and the Dean of Academic and Student Affairs will revise appropriately and will then send the Assessment Plan to the President for review and commentary; the final revision will be completed and, upon approval by the President, it will be presented to the Board of Trustees for consideration. Upon the approval of the Board of Trustees, the assessment plan will be forwarded to the State University of New York.

The following timeline was predicated in 1989:

* Summer 1989 - September 1989: Complete inventory of current assessment processes; continue review of effectiveness of these; decide which to continue; decide which to discontinue.

* September 1989 - November 1989: Explore need for new assessment processes and instruments; review those which appear to be most promising; decide which to incorporate with ongoing processes.

* November 1989 - February 1990: Review composite (ongoing and new) assessment processes in context of NCCC goals and mission statement; structure assessment plan according to model most suitable for meeting NCCC needs and SUNY guidelines.

+ February 1990 - April 1990: Prepare draft of multi-year assessment plan; carry out consultive process; conduct usual data collection and appropriate new data collection.

+ May 1989: Complete and refine multi-year assessment report.

+ June 1990: Submit multi-year assessment report to State University of New York.

This timeline proved to be an effective working calendar. Those tasks marked "+" were completed; those tasks marked "*" will be ongoing. Each task force devised a general 1990 - 1994 timeline for the segment of this report with which it was charged. These are incorporated in the texts of individual segments. An overall timeline outlining tasks for the whole project will be completed 1990 - 1991. This will be expanded in greater detail annually for each subsequent year.

OUTCOME ASSESSMENT PLANNING 1989 - 1994

It should be noted that presently outcome assessment occurs at the institutional, the divisional, the program, the course and the individual student level. The following college-wide outcome assessment plan summarizes assessment processes which will be continued or initiated for 1989 - 1994. It is assumed that amendments and additions will be made yearly. This information is presented in the format suggested by SUNY.

* *

BASIC SKILLS

Related NCCC Mission Goal Statement:

(#4) The college will use and improve instructional techniques that accommodate student differences in learning rate and style, aptitude and background.

SUMMARY REVIEW OF PROGRESS IN ASSESSMENT OF BASIC SKILLS GOALS, OUTCOMES, MEASURES 1989 - 1990 AND RECOMMENDATIONS FOR ACTION 1990 - 1994

Outcome Assessment Plan
North Country Community College

The goals, outcomes, and measures predicated in the Preliminary Outcomes Assessment Plan (1989 - 1990) were found to be suitable for the tasks projected for the preliminary assessment process in the area of basic skills. As many appear to be useful in the long term assessment process as well, they will be continued throughout the assessment plan period. All items will be subjected to continuing scrutiny. In order to assure their continued efficacy, they will be reviewed each year and amended if found to be inappropriate. The date of the initiation of an item has been added to each objective in order to trace the evolution of the assessment process at NCCC.

GOALS 1989 - 1994

1. To measure current levels of achievement in communication, computation, general education and reading/study skills of all entering students through a comprehensive, college-wide placement testing process. **(originated 1989; to be continued 1990 - 1994)**

2. To use placement test scores to assist in appropriate course placement for each full-time student. **(originated 1989; to be continued 1990 - 1994)**

3. To identify students in need of remediation in computation, communication and reading/study skills. **(originated 1989; to be continued 1990 - 1994)**

4. To monitor the college-wide minimum placement skill levels needed for college work in computation, communication, reading/study skills. **(originated 1989; to be continued 1990 - 1994)**

5. To insure that <u>all</u> students realize the minimum skill level in communication, computation and reading/study skills before they assume a full schedule of courses from the general curriculum **(originated 1989; to be continued 1990 - 1994)**

6. To improve the performance of <u>all</u> NCCC students in basic communication, computation and reading/study skills. **(originated 1989; to be continued 1990 -1994)**

OUTCOMES

1. To develop basic skills and skill levels appropriate for college level work **(originated 1989, to be continued 1990 - 1994)**

2. To develop basic skills and skills levels appropriate for securing and maintaining employment. **(originated 1989; to be continued 1990 - 1994)**

3. To ensure that all graduates of NCCC have met the minimum skills requirements in computation, communication and reading/study skills. **(originated 1989; to be continued 1990 - 1994)**

MEASURES

The present practice of giving placement tests in communication, in computation and in reading/study skills to all entering, matriculated students on all campuses in all programs will be continued. These placement tests will serve as measures of basic skills and will continue to be used as entrance measures to developmental courses as well as some other courses.

1. Math placement will be based on an informal computations placement inventory developed by the Allied Health/Math/Science Division. **(originated 1989; to be continued 1990 - 1994)**

2. Communications placement will be based on scores attained in ETS Assessment and Placement Test for Community College Students and informal divisional analysis of a writing sample. **(originated 1989; to be continued 1990 -1994)**

3. Reading/study skills placement will be based on scores attained in ETS Assessment and Placement Test for Community College Students. **(originated 1989; to be continued 1990 - 1994)**

4. High school records and ACT or SAT scores will be used (when available) to assist in placement decisions. **(originated 1989; to be continued 1990 - 1994)**

5. Admissions records will be scrutinized to identify students with special needs and students who are at risk. These students will be referred to the appropriate campus Learning/Advisement Center Director. **(originated 1989; to be continued 1990 - 1994)**

6. The present practice of using individual instructor exams as exit measures in developmental courses and in courses such as MAT 120 -Introduction to Algebra, MAT 121 - Statistics, COM 101 - English Composition will be examined. **(originated 1989; discussion of efficacy or alternatives to be continued 1990 - 1991; to be linked to findings in examination of course embedded measures of assessment targeted in general education for 1990 - 1994)**

7. The use of alternative exit measures such as departmental or standardized exams will be explored.

   a. The Communications and Math Departments, particularly the Division Chairs and current instructors, will design follow-up methods to monitor student skills improvement from basic skills level courses to college level courses.

   b. These will be reviewed regularly in order to monitor coherence of student skill acquisition course level to course level; summaries of discussions and findings will be forwarded to the Dean of Academic and Student Affairs for review by the Assessment Committee.

   c. Course descriptions will be refined and amended by the Division to reflect annual, reported findings.

   d. The efficacy of re-administration of placement exams within the same semester will be examined; alternatives will be explored. **(originated 1990 - 1991)**

8. The present "Freshman Year Experience Program" (FRS 100- Master Student) will be scrutinized, amended and more closely linked to specific basic skills instructional components. **(originated 1990 - 1991)**

9. The assessment of basic skills will be integrated, where feasible, with the development of general education assessment. **(originated 1990 - 1991)**

10. The practice of surveying graduates to develop measures of employment and transfer success will be continued. **(originated 1989; to be continued 1990 - 1994)**

11. Other sources of measuring transfer success will be sought, e.g. SUNY Central and individual college reports. **(originated 1989; to be continued 1990 -1994)**

12. Other sources of measuring appropriateness of preparation for employment will be sought, e.g. questionnaires to local employers, standardized instruments for measuring job success. **(originated 1989; to be continued 1990 - 1994)**

DATA BASE (originated 1989; to be continued 1990 - 1994)

1. Placement Exam Scores
2. ACT or SAT Scores (when available)
3. High School Records
4. Alumni Survey
5. Admissions Information
6. SUNY Central and individual college reports on transfer student performance
7. Questionnaires to employers and standardized measures of work place success
8. Individual Diagnostic Testing
   a. Differential Aptitude Test
   b. Woodcock-Johnson Assessment Test
   c. Special testing - Diagnostic Center

The initial collection of placement scores for all campuses will be the responsibility of designated placement test personnel.

The initial repository of placement test data will be division offices.

The initial analysis of placement and related data will be the responsibility of the division chairs.

The transfer of placement data from division offices to the Office of Institutional Research and Records will be the responsibility of the Office of Admissions; entry will be to the Student File. **(originated 1990 - 1991)**

The final repository for placement test data will be the Office of Institutional Research and Records.

The final analysis of placement and related data will be the responsibility of the Director of Institutional Research and Records.

In addition to the data base established by the Office of Institutional Research and Records, data on exit and entrance levels in the first college level courses in the areas of computation, communication and reading/study skills will be isolated and arrayed for comparative study particularly in relation to persistence (successful degree completion or successful transfer).

An additional Assessment Task Force will be named to work with the Office of Institutional Research and Records in order to develop appropriate, new data analysis objectives. The key objective of this task force will be to articulate "new" questions needed to be asked to further use data presently collected. For example, a more careful and integrated profile of NCCC's major populations might be developed by examining variables which indicate similarities in needs and differences in needs. Such studies, developed from questions articulated by those staff persons most closely associated with particular groups of students, should lead to better delivery of instruction and services and also help to refine on going assessment processes. **(originated 1990 - 1991)**

* *

GENERAL EDUCATION

Related NCCC Mission Goal Statements:

(#1) The college will provide post-secondary educational opportunities and related services to residents of Essex and Franklin Counties and to others who can benefit from them.

(#2) The college will provide full and part-time admissions to appropriate programs to anyone with a high school or equivalent diploma or who is 18 years or older.

SUMMARY REVIEW OF PROGRESS OF ASSESSMENT OF GENERAL EDUCATION OUTCOMES, MEASURES AND RECOMMENDATIONS FOR ACTION 1990 - 1994

The goals, outcomes and measures predicated in the Preliminary Outcomes Assessment Plan (1989 - 1990) were found to be suitable for "take-off" in this area. Unlike the other designated areas of assessment, NCCC had very little practice that could be applied to assessment in general education. The General Education Task Force

was faced with defining and designing suitable assessment activities without reference to a set of current practices which could be adapted. Unlike the other task forces, they had relatively little practice to convert to a base for formal assessment processes as outlined in the SUNY Guidelines. Their work (see Appendix A, Recommendations for Assessment of General Education at North Country Community College: A Report Prepared by the General Education Task Force, May 1990) provides that base. It will serve as the guide for assessment of general education at North Country Community College 1990 - 1994. In summary, it predicates general education assessment based on the identification and measurement of general education competencies "embedded" in courses being offered or to be designed. Multiple means of assessment are recommended. These are based on two principal formats: standardized or generalized testing of students at entrance and exit points to the college or a particular program or assessment conducted on a course specific basis on entrance and exit to a course. Course outlines, generic descriptions of the essential characteristics of each course, are recommended as the best vehicle for developing and defining assessment measures specific to particular courses. This task force offers a revised model of the course outline format presently being used and provides a "checklist" to assist in the design and implementation of course specific general education assessment measures (see Appendix A, General Education Report).

All relevant items, those predicated in the Preliminary Outcomes Assessment Plan (1989 - 1990) and those predicated in the General Education Report, will be subjected to continuing scrutiny. In order to assure their continued efficacy, they will be reviewed each year and amended if found to be inappropriate. Where needed new items will be added. The date of initiation of each item has been added in order to trace the evolution of the assessment process at NCCC.

GOALS

1. To re-open campus-wide discussion of general education. **(originated 1989; discussion to be continued 1990 - 1994)**

*2. To develop a campus-wide definition of general education. **(originated 1989; discussion to be continued 1990 - 1994)**

*3. To develop a campus-wide philosophy of general education. **(originated 1989; discussion to continue 1990 -1994)**

*The General Education Task Force (1989 -1990) offers the following as statements of philosophy and definition:

General education at NCCC emphasizes active development of attitudes and values, knowledge, and skills needed to live happily and productively, individually and as a member of society.

General education is future responsive. Its philosophy assumes only that the future will be different from the present. General education exists to prepare students for change -- in their individual lives, in their society and in the world **(for complete text of NCCC General Education Task Force findings, see Appendix A; commentary, rational, and illustrations are contained in this document)**

To produce graduates who have the competencies outlined below: **(originated 1990; to be continued 1990 - 1994)**

a. Literacy

   1. Writing

   2. Speaking

   3. Reading

   4. Using Computers

b. Critical Thinking

c. Quantitative Reasoning

d. Independent Acquisition of Knowledge; Research

e. Intuitive and Imaginative Processes

f. Ethical and Moral Principles; Make Value Judgments

g. Sensitivity to Other Cultures

h. Content Areas

4. To identify specific general education courses. **(originated 1989); emphasis altered to read:**

   To define general education competencies and content in specific courses **(originated 1990; to be continued 1990 - 1994)**

To determine which of these should be significantly developed in each course (**originated 1990; to be continued 1990 - 1994**)

To modify generic course outline format to include a general education assessment section (**originated 1990; to be continued 1990-1994**)

To design specific assessment measures for each course in which general education competencies are to be significantly developed (**originated 1990; to be continued 1990 - 1994**)

5. To arrive at a campus-wide consensus on a general education definition, philosophy and the courses most suitable for insuring general education. (**originated 1989; discussion to be continued 1990 - 1994 predicted on material marked by "*" and Appendix A, General Education Report**)

6. To develop a campus-wide timetable for reaching consensus on matters pertaining to general education. (**originated 1989**)

7. To assign various campus-wide constituencies the task of identifying general education objectives and outcomes specific to their areas. (**originated 1989; to be continued 1990 - 1994**)

   Amended to read as follows:

   Divisions will identify those courses under their purview with significant general education competencies.

8. To integrate the general education objectives and outcomes identified by various constituencies [divisions] and to arrive at a campus-wide statement on general education objectives and outcomes. (**originated 1989; to be continued 1990 -1994**)

9. To design an assessment process to measure general education outcomes college-wide. (**originated 1989; to be continued 1990 - 1994; as indicated in above and Appendix A**)

OUTCOMES: STATED IN GENERAL TERMS 1989 - EXPANDED 1990 - TO BE CONTINUED AS EXPANDED IN SPECIFIC GENERAL EDUCATION COMPETENCIES 1990 - 1994

Outcome Assessment Plan
North Country Community College

1. To enable students to develop a knowledge base sufficient to succeed in a dynamic society.

2. To enable students to develop critical thinking processes sufficient to cope with life in a dynamic society.

3. To enable students to develop information processing and information acquisition skills appropriate for living and working in a society with rapidly changing technical processes.

4. To enable students to develop their intuitive and imaginative processes.

5. To enable students to develop a knowledge base sufficient for continuous and independent learning.

MEASURES

Effective measures for assessing general education outcomes will be sought.

1. Appropriate models for outcome data gathering relevant to general education will be identified. **(originated 1989; to be continued 1990 - 1994)**

2. Standardized tests available for measuring general education outcomes will be examined. **(originated 1989; to be continued 1990 - 1994)**

3. Data collection already in progress at NCCC will be evaluated for its relevancy in determining general education outcomes (e.g. degree completion, transfer success, specific course outcomes). **(originated 1989; to be continued 1990 - 1994)**

4. New data collection processes for assessing general education outcomes will be instituted where needed. **(originated 1989; to be continued 1990 - 1994)**

DATA BASE

1. Alumni Survey **(originated 1989; to be continued 1990 - 1994)**

2. Transfer Information **(originated 1989; to be continued 1994)**

3. Standardized Tests measuring general education outcomes **(originated 1989; to be continued 1990 - 1994)**

4. Instruments designed by other institutions to measure general education outcomes **(originated 1989; to be continued 1990 - 1994)**

5. Individual Student Grades in courses designated General Elective **(originated 1989; to be continued 1990 - 1994)**

6. Degree completion information **(originated 1989; to be continued 1990 - 1994)**

7. Selected course outlines **(originated 1990; to be continued 1990 - 1994)**

8. Instruments designed by Divisions **(originated 1990; to be continued 1990 - 1994)**

* *

SPECIALIZED EDUCATION MAJORS: TRANSFER DEGREES (A.A. AND A.S.), CAREER AND VOCATIONAL PROGRAMS (A.A.S.) AND CERTIFICATES

Related NCCC Mission Goal Statement:

(#3) The college will provide degree and certificate programs which enable students to continue their educations at other post-secondary institutions, to find gainful employment, or to enhance occupational skills.

SUMMARY REVIEW OF PROGRESS IN ASSESSMENT OF THE SPECIALIZED MAJOR: TRANSFER AND CAREER PROGRAMS GOALS, OUTCOMES, MEASURES 1989 - 1990 AND RECOMMENDATIONS FOR ACTION 1990 - 1994

The goals, outcomes and measures predicated in the Preliminary Outcomes Assessment Plan (1989 - 1990) were found to be suitable for the tasks projected for the preliminary assessment process in the area of The Major: Transfer and Career Programs. As many appear to be useful in the long term assessment process as well, they will be continued throughout the assessment plan period. Some new assessment processes have been recommended for consideration 1990 - 1994. Special emphasis will be placed on dissemination of assessment information among task force member and Program Directors and this task force's activities and those of the Program Marketing Committee (coordinated by George Maniates, Admissions Counselor) will be integrated where possible. All items will be

subjected to continuous scrutiny. In order to assure their continued efficacy, they will be reviewed each year and amended if found to be inappropriate. The date of the initiation of items has been added to each objective in order to trace the evolution of the assessment process at NCCC.

GOALS

1. To offer degree programs which prepare students to successfully transfer to four-year college and university programs. **(originated 1989; to be continued 1990 - 1994)**

2. To offer career programs which provide students with knowledge and skills sufficient to obtain and maintain employment in a dynamic work place. **(originated 1989; to be continued 1990 - 1994)**

OUTCOMES

1. To continue and to enhance degree/program review. **(originated 1989; to be continued 1990 - 1994)**

2. To strengthen degrees and programs through the use of cyclical program review. **(originated 1989 - 1994)**

MEASURES (originated 1989 - to be continued 1994)

All degree and certificate programs are reviewed every three (3) years. Each is subjected to internal and external audits in a formal review process which includes a written report by a team consisting of internal and external reviewers and students. The review process is designed to provide regular scrutiny of degree/program goals, objectives and student outcomes. Additionally, all A.A.S. program directors meet regularly with advisory groups from the field who informally but regularly discuss student success in the workplace from the point of view of employers or colleagues. Finally, the Allied Health programs (LPN and ADN Nursing and Radiologic Technology) are evaluated by state licensing agencies on a regular basis. All students in these programs must sit for licensure exams. The results of these exams are regularly reported to NCCC and their outcomes scrutinized by program faculty and administrators.

Instructional review is conducted regularly. Classroom observations are routinely conducted college-wide. Both full-time and adjunct faculty receive written reports from supervisors when a classroom observation is conducted. Student evaluation of individual instructors is also routinely done. Both full-time and

adjunct instructors receive summaries of student ratings and copies of student commentaries. All full-time faculty also receive written performance evaluations in a summative form from their immediate supervisors. The Dean of Academic and Student Affairs prepares an annual performance evaluation in narrative form for each member of the faculty and for appropriate administrators. Supervisory evaluations are compared to self evaluations (Growth Plans) developed by each member of the professional staff.

The Office of Institutional Research and Records conducts alumni/graduate and transfer surveys, grade analysis, and profiles the student body in various ways on a regular basis and arrays data in a Fact Book published annually.

Beginning in the Spring of 1989, all Division Chairs, Program Directors and Campus Directors conducted a review of the area they supervise as a basis for an annual written report to the Office of the Dean of Academic and Student Affairs. These reports delineated areas determined to need improvement, outlined those things which seemed to create barriers to improvement and predicated strategies for overcoming perceived barriers. These reports are intended to link short range goals to the long range planning process - a college-wide planning process already in place.

ADDITIONAL MEASURES RECOMMENDED 1990 BY SPECIALIZED EDUCATION MAJORS: TRANSFER AND CAREER PROGRAMS TASK FORCE ON ASSESSMENT
To be continued
1990 - 1994

1. Create a computer file for each program within this task force's purview and document what assessment techniques are in place (see Appendix C).

2. Place hard copy of same on reserve in LRC to insure availability to college community.

3. Critique and note the strengths and weaknesses of current assessment techniques in each program including all internships and practica.

4. Compare assessment techniques from program to program; determine universal practices; determine unique practices; standardize assessment practices where possible.

5. Forward recommendations to Assessment Committee via Office of Dean of Academic and Student Affairs.

6. Monitor and adjust current and new measures as needed on a yearly review of efficacy basis.

7. Administer and review results of the NCCC College Student Survey to assess information relevant to program operations regarding students in **present** attendance (see Appendix B).

To facilitate this task force's work, the Dean of Academic and Student Affairs is charged with requesting that each program submit the following to this task force no later than September 30, 1990:

1. Documentation of established program goals that are specific in terms of activity a graduate of said program can perform as a result of successful completion of that program's curriculum.

2. Documentation of assessment techniques used by the program to evaluate accomplishment of stated goals; for example, follow-up survey instruments are sent to each graduate within six months of program completion and the graduate is asked to rank his/her agreement level in terms of personal accomplishment of stated and specific objectives of the program.

3. Documentation that the results of self-evaluation via the above assessment technique or another are reflected in program organization. For example, if a high percentage of graduates felt negatively about the accomplishment of a program objective, the program needs to demonstrate how it can better educate the student in that area.

   n.b. Annual Program Reports to the Office of the Dean of Academic and Student Affairs will be amended to include the above. These will be forwarded to this task force.

DATA BASE (originated 1989; to be continued 1990 - 1994)

1. Degree/Program Review

2. Instructional Outcomes Review

   a. Classroom Evaluation

   b. Student Evaluation

c. Supervisory Evaluations

d. Self Evaluation (Personal Growth Plans)

3. Alumni Survey

4. Annual report to Office of Dean of Academic and Student Affairs

5. Advisory Committee Reports

6. Licensure Exam Results

7. Grade Analysis

8. Standardized or division-wide Exam Results

9. Student Profiles developed by Office of Institutional Research and Records

10. Computer Disks Outlining Each Program

11. North Country Community College Student Survey

* *

SOCIAL AND PERSONAL DEVELOPMENT

Related NCCC Mission Goal Statements:

(#5) The college will provide continuing education and community service programs by offering credit and non-credit courses.

(#7) The college will provide a variety of social, cultural, health and recreational programs to enhance the development of its students.

SUMMARY REVIEW OF PROGRESS IN ASSESSMENT OF SOCIAL AND PERSONAL DEVELOPMENT GOALS, OUTCOMES, MEASURES 1989 - 1990 AND RECOMMENDATIONS FOR ACTION 1990 - 1994

The goals, outcomes and measures predicated in the Preliminary Assessment Plan (1989 - 1990) were found to be suitable for the tasks projected for the preliminary assessment process in the area of Social and Personal Development. As many appear to be useful in the long term assessment process as well, they will be continued throughout the assessment plan period. Some new

assessment processes have been recommended for consideration 1990 - 1994. Special consideration will be given to the equitable but appropriately diverse extension of student services and activities campus-wide - a particular problem given multiple and unique campuses. It should be noted that, in addition to having many similarities, each of the campuses has distinct differences. For instance, the Main Campus at Saranac Lake has a preponderance of traditionally aged students (ages 19 - 21) who live in apartments and privately owned group houses in and around Saranac Lake. They are often away from home for the first time. Most attend full-time, day time classes and anticipate transferring to a four year school. In contrast, the Branch Campuses at Malone and Ticonderoga/Elizabethtown (respectively one half and one quarter the student population of the Saranac Lake Campus) have a preponderance of students 26 - 45 years of age. Most commute from their homes, attend late afternoon and evening classes and are part-time students who may or may not have plans for transferring to a four year school upon entry. In further contrast to Main Campus and Branch Campus students are the Inmate Higher Education Program students. Located in five correctional facilities - two state medium security facilities in Malone and two state facilities (a medium and a camp facility) and a federal medium security facility in Saranac Lake - these students are male and vary in age, language and ability to transfer to four year schools. Security requirements limit student service programming in the facilities. The Task Force for this area recognizes the unique challenge implicit in designing, administering, implementing and assessing student programs which foster appropriate and equitable social and personal development in these circumstances. All items included will be subjected to continuous scrutiny. In order to insure their continued efficacy, they will be reviewed each year and amended if found to be inappropriate. The date of initiation of items has been added to each objective in order to trace the evolution of the assessment process at NCCC.

GOALS

1. To help students develop a positive self-image and a sense of self-worth. **(originated 1989; to be continued 1990 - 1994)**

2. To help students develop self direction. **(originated 1989; to be continued 1990 - 1994)**

3. To help students develop an appreciation for life-long learning. **(originated 1989; to be continued 1990 - 1994)**

4. To encourage students to participate fully in community life and to aspire to be good citizens. **(originated 1989; to be continued 1990 - 1994)**

5. To help students to develop positive life goals. **(originated 1989; to be continued 1990 - 1994)**

6. To provide affective learning experiences which are connected and equitable to cognitive learning experiences. **(originated 1989; to be continued 1990 - 1994)**

7. To help students to be successful in the varied social roles they will assume in a complex and dynamic society. **(originated 1989; to be continued 1990 - 1994)**

OUTCOMES

NCCC provides varied personal and social programs, services and activities designed to meet the needs of a heterogeneous student population.

1. To enhance individual development and address student needs holistically. **(originated 1989; to be continued 1990 - 1994)**

2. To encourage personal and social growth. **(originated 1989; to be continued 1990 - 1994)**

3. To encourage persistence, i.e. to increase the numbers of students receiving degrees or transferring. **(originated 1989; to be continued 1990 - 1994)**

4. To discourage attrition, i. e. to decrease the number of students who drop out. **(originated 1989; to be continued 1990 - 1994)**

5. To help students develop better coping skills. **(originated 1989; to be continued 1990 - 1994)**

6. To help students develop a support network and to identify special sources of help. **(originated 1989; to be continued 1990 - 1994)**

7. To encourage students who have dropped out to return. **(originated 1989; to be continued 1990 - 1994)**

8. To enhance and expand services in the affective domain and strengthen links to cognitive activities. (**originated 1989; to be continued 1990 -1994**)

MEASURES

1. Student Activities will be expanded, funded more equitably and linked campus-wide. For example, a broader base for Student Government Association activities will be assured by the implementation of a new Student Government Association Constitution and the use of distance learning equipment to link students from various campuses through campus-wide meetings which will not require travel; this will enable wider participation in SGA decision-making and will assure the more equitable distribution of student fees for the financing of activities campus-wide. (**originated 1989; to be continued 1990 - 1994**)

   REVIEW OF 1989 ACTIVITIES

   a. A new SGA Constitution was written and adopted by students across all campuses (1989 - 1990); refinement of language and final approvals (Association Board and Board of Trustees) is anticipated for 1990 - 1991.

   b. A Leadership Seminar was held for all officers of SGA (1990); another Leadership Seminar is scheduled for August 1990; this will be held over a two day period and will be based on material developed by participants in the last Leadership Seminar; their critiques and new materials will be developed by the Office of Student Services and Counseling, the Executive Committee of the Association and the Office of the Dean of Academic and Student Affairs.

   c. Distance learning equipment was used for joint SGA meetings across all campuses on several occasions; this practice will continue 1990 - 1994.

   d. Distance learning equipment will be used for Association Board Meetings (1990 - 1994) to insure better campus-wide communication between SGA's and the Association and to insure a more equitable distribution and more open discussion of use of student fees campus-wide.

2. Programs addressing the broad range of student interests and needs will be developed. For example, campus-wide

programs addressing such issues as alcohol and substance abuse, problems in human sexuality, personal budgeting, health and wellness, stress reduction and maintaining personal relationships are already planned and budgeted. (**originated 1989; to be continued 1990 - 1994**) (see Appendix C).

a. The programs held (1989 - 1990) were deemed successful; such programming will be continued; the intent is to continue to move away from the individual, therapeutic model (previously the principal counseling mode at NCCC) and to move toward a broader model emphasizing wellness rather than dysfunction (problems); (see general recommendation, SUNY Assessment Review, 1989).

The following programs are planned for 1990 - 1991:

i. Personal/Emotional Adjustment
ii. Making Decisions
iii. Taking Action Toward Better Education and Employment
iv. Maintaining Progress Toward Self-Directed Behavior

These will be partially funded by VEA monies.

b. The number of individual campus student activities will be increased (**originated 1989; to be continued 1990 - 1994**).

1989 - 1990

Cooperative efforts among SGA's, the offices of Campus Directors and the Office of Director of Student Services and Counseling resulted in more student activities of a varied nature on every campus. These ranged from a visit to LL Bean, attendance at a production of Cats, a bowling team, a series of family dinners, formal dances and dinners to a presentation by a speaker who was at Kent State. All of these activities were planned to appeal to the broad spectrum of students found at each site. For the first time, student activity programs were conducted by NCCC at an inmate facility.

1990 - 1994

The activities originated in 1989 will be continued and reviewed each year; original activities will be increased; successful activities will be repeated; increased student participation in planning, implementation and attendance will be sought.

c. Closer cooperation with Master Student (FRS 100) will be arranged; counseling activities and SGA activities will be more thoroughly linked to this and other on-going orientation programming. (**originated 1989; to be continued 1990 - 1994**)

1989 - 1990

New links among orientation activities, Master Student, and Student Services/Counseling were made. For example the Career Counselor administered Differential Aptitude Test to all FRS 100 students, who were then invited to make individual appointments with her; referrals for personal counseling, tutoring and special assistance were forwarded to counselors and Learning/Advisement Center Directors by FRS 100 instructors.

1990 - 1994

The activities originated in 1989 will be continued and reviewed each year; successful activities will be repeated; new activities will be tried; increased student participation in planning, implementation and attendance will be sought.

d. Orientation programming has been revised (**1990 - 1991**) and will include longer range activities, activities designed for continuing students, and special activities for groups with different needs (e.g. students living in student housing, single parent students, long-distance commuters) (**originated 1989; to be continued 1990 - 1994**) (see also above comments).

3. Programs addressing the needs of special groups will be expanded. For example, a workshop addressing the problems of individuals who are single, heads-of-households was offered in **August, 1989** for appropriate, entering students. Funds for child care and child care arrangements will be provided for this activity; later workshops on parenting and related topics are planned and budgeted.

1989 - 1990

The August 1989 Single Parents Workshop was successful. However, more activity and a system for following up on contacts made with special groups during Orientation is necessary.

1990 - 1994

To help single parents and displaced homemakers deal with their unique problems and responsibilities, NCCC will develop and maintain a resource center which will be accessible to single parent/displaced homemaker students. This will also be used in individual counseling and career sessions as well as integrated into the career programs with the assistance of career program directors. This center, the materials and the regular counseling available will integrate special counseling and advisement and on-going academic advisement for single parent and displaced homemaker students. Funding will be partially sponsored by VEA Grant monies.

4. Greater integration of and further expansion of Learning/Advisement Center activity will be initiated. For example, early and more comprehensive reporting of students in academic jeopardy will be instituted and provision for assistance will be made. A three week attendance check will be made by Learning/Advisement Center Directors on each campus. Attempts to contact personally those frequently absent or disappeared during the first three weeks will be carried out. (**originated 1989; to be continued 1990 - 1994**) (see above)

5. Counseling activities will be examined. Better and more equitable delivery of campus-wide personal and career counseling will be developed. For example, intake and referral processes will be enhanced through the use of Learning/Advisement Center personnel and Master Student instructors, freeing personal and career counselors to concentrate more definitively on the delivery and design of more direct individual and group services. (**originated 1989; to be continued 1990 - 1994**) (see above)

6. The offering of a comprehensive orientation to college programs will be continued and expanded. For example, all first time, first year, full-time students will continue to be required to participate in opening orientation activities and in Master Student classes. These have been

redesigned and more carefully linked with counseling and Learning/Advisement Center activities and planning. **(originated 1989; to be continued 1990 - 1994)**

DATA BASE (originated 1989; to be continued 1990 - 1994)

1. Alumni Survey
2. Former Student Questionnaire
3. Annual Report to Office of Dean of Academic & Student Affairs
4. Student Profiles developed by Office of Institutional Research and Records (NCCC Institutional Fact Book)
5. End of Year Student Survey (information inventory of Student Support Services; random sample of student opinion)
6. Admission Materials
7. Individualized Diagnostic Testing
   a. Differential Aptitude Test
   b. Woodcock Johnson Assessment Test
   c. Special testing - Diagnostic Center

* *

CONCLUSION

NCCC regularly engages in numerous activities that fulfill actual or potential outcome assessment objectives. While some additional data collection and manipulation may be useful, NCCC's focus for 1990 - 1994 will be to link outcome assessment processes more closely to continued efforts to improve institutional effectiveness.

APPENDICES

Appendix A - Recommendations for Assessment of General Education at North Country Community College: A Report Prepared by the General Education Task Force, May 1990

Appendix B - North Country Community College Student Survey - Fall 1990

Appendix C - Outline for Disk Information - The Specialized Major: Transfer and Career Programs

* - All data collected and discussed have been arrayed in North Country Community College Fact Book. Copies are available upon request.

APPENDIX A

RECOMMENDATIONS FOR ASSESSMENT OF GENERAL EDUCATION AT NORTH COUNTRY COMMUNITY COLLEGE

A Report Prepared by the General Education Task Force

May, 1990

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I. Introduction

The General Education Task Force was formed by the Dean of Academic and Student Affairs to provide recommendations that will be reviewed by the Campus Assessment Committee as part of the larger process of designing a Five Year Outcomes Assessment Plan.

The Task Force was given four objectives: to review the Preliminary Outcome Assessment Plan; to accept or amend the general education segment of the plan; to form specific recommendations for completing those aspects of the plan that could be implemented in 1989-90; and to forward a five year plan for assessing general education at NCCC, to be received by the Dean of Academic and Student Affairs no later that 1 May 1990.

The members of the Task Force were JoAnn Branch, Walter Lender, Donald Morgan, William Price, Kenneth Wiley, and Douglas Wilmes (chairperson).

II. Overview

The proposed plan for assessment of general education applies the "Principles of Undergraduate Assessment for the SUNY System" (12/12/88), which require that assessment plans be comprehensive, comprehensible, complex, cost effective, collegial, constructive, and campus based.

The most significant characteristic of the College is its small absolute size (512 total FTE enrollments, Fall 89 semester) and even smaller effective size, due to the distribution of these enrollments among multiple instructional sites and campuses located as distant as 75 miles from the main campus at Saranac Lake.

Therefore, generic course descriptions--the Course Outlines--are particularly significant documents at the College, because they are one of the principle means by which consistency of instruction is obtained throughout the institution.

As will be discussed in more detail below, we recommend that the Course Outlines be employed as key documents in the assessment process. There are well-established procedures for making

substantive changes in the Course Outlines. Thus, the recommended usage of Course Outlines to define assessment measures will contribute to the integration of assessment within the College's system of governance. Furthermore, the Course Outline format, appropriately modified, will provide an instrument for the development of specific general education assessment objectives for all courses and for the application of these measures to all sections of a given course. Finally, a critical review of existing Course Outlines, while occasioned by the assessment initiative, can be expected to result in a general qualitative improvement in the Course Outlines and to motivate the development of new courses. Because the assessment plan provides a conceptual framework for thinking about curriculum, particularly in the complex area of general education, it may be expected to have collateral benefits beyond those generic to the assessment effort itself.

III. General Education: Definition and Philosophy

General education is a notoriously abstract concept, subject to widely varying interpretations. The literature on the subject is "inconsistent and contradictory," so much so that its authors sometimes seem to be "talking about very different things" (Boyer and Levine 2).

Representative Approaches to General Education

Turning to some recent attempts to define the concept, we find:

The AAC Task Group on General Education, which defines general education as "the cultivation of the knowledge, skills, and attitudes that all of us use and live by during most of our lives--whether as parents, citizens, lovers, travelers, participants in the arts, leaders, volunteers, or good samaritans" (A New Vitality 3) and suggests a competency-based approach. The task group recommends that active learning be encouraged and that students be enlisted as coinquirers. Pedagogically, the task group endorses the suggestions of a report published by the Association of American Medical Colleges as being relevant to "a new definition of teaching." These include:

--considerable reduction of reliance on memorizing,

--identification of the major concepts or principles in the areas under study,

--emphasis on students' independent learning that carries over into post-school lives,

--reduction of lecturing, and

--replacement of lecturing by small group instruction (39).

Boyer and Levine, who define the "agenda for general education" as "those experiences, relationships, and ethical concerns that are common to all of us simply by virtue of our membership in the human family at a particular moment in history. General education is an institutional affirmation of society's claim on its members" (19). General education thus emphasizes that which is shared by educated members of our society: use of symbols, membership in groups and organizations, producing and consuming, relationship with nature, sense of time, and values and beliefs (35-45).

The Harvard Report on the Core Curriculum, which defines the purpose of the core curriculum--and hence, broadly speaking, of general education to the degree this concept is equivalent to the traditional concerns of the liberal arts & science disciplines--as being to produce "an educated person." The characteristics of such a person were defined in Dean Rosovsky's 1975-76 Annual Report, as follows:

1. An educated person must be able to think and write clearly and effectively.

2. An educated person should have achieved depth in some field of knowledge. Cumulative learning is an effective way to develop a student's powers of reasoning and analysis, and for our undergraduates this is the principal role of concentrations.

3. An educated person should have a critical appreciation of the ways in which we gain and apply knowledge and understanding of the universe, of society and of ourselves. Specifically, he or she should have an informed acquaintance with the aesthetic and intellectual experience of literature and the arts; with history as a mode of understanding present problems and the processes of human affairs; with the concepts and analytic techniques of modern social science; and with the mathematical and experimental methods of the physical and biological sciences.

4. An educated person is expected to have some understanding of, and experience in thinking about, moral and ethical problems. It may well be that the most significant quality of educated persons is the informed judgment which enables them to make discriminating moral choices.

5. Finally, an educated American, in the last third of this century, cannot be provincial in the sense of being ignorant of other cultures and other times. It is no

> longer possible to conduct our lives without reference to the wider world within which we live. A crucial difference between the educated and the uneducated is the context to which one's life experiences is viewed in wider contexts ("Report on the Core Curriculum" 40).

To attain these goals, the Harvard core curriculum established five area requirements, as follows: Literature and the Arts, Historical Study, Social Analysis and Moral Reasoning, Science, and Foreign Cultures.

The NEH Recommended Core Curriculum (50 Hours), which cites the Harvard core curriculum's focus on life "as a responsible human being and citizen" (Cheney 7) and recommends a core focusing on traditional general education areas (Cultures and Civilizations, Foreign Language, Concepts of Mathematics, Foundations of the Natural Sciences, The Social Sciences and the Modern World). General education is here identified with the central liberal arts & sciences disciplines, and a core is recommended as an antidote to the lack of coherence, fragmentation, and haphazardness of distributional approaches to liberal arts & science requirements.

General Education at NCCC

As the above examples suggest, it is difficult to define general education in isolation from a vision of how the task of general education should be conducted by an institution. Formally, as Boyer and Levine point out, colleges usually provide a general education either "narrowly, on the basis of traditional disciplines, or broadly, on the basis of interdisciplinary courses or themes, with a distinct accent on the former" (24). (NCCC, of course, emphasizes the traditional academic disciplines, linked to distributional requirements.) In terms of outcomes, they conclude, current practice is to focus either on "educated person outcomes" or on "competency-based outcomes" (33).

Our approach has been eclectic, developed with an eye to the present realities of our situation, as these involve program requirements, scheduling and staffing considerations, the institutional culture, and so on. Clearly no definition of general education could be offered that would imply a need for our practice to change in a revolutionary, rather than evolutionary, manner.

We have thus attempted to identify the kinds of competencies and the kinds of knowledge that a good general education should provide within the context of NCCC. Concerns about how these objectives might be achieved--and how we might be able to prove they have been achieved--are dealt with in terms of the existing

academic procedures and curricula of the College. The definition of general education that emerges from this endeavor asks us to consider what an educated person should be able to do:

> General education at NCCC emphasizes active development of attitudes and values, knowledge, and skills needed to live happily and productively, individually and as a member of society.
>
> General education is future-responsive. Its philosophy assumes only that the future will be different from the present. General education exists to prepare students for change--in their individual lives, in their society, and in the world.

Perhaps one final distinction will further clarify the nature of general education: specialized majors perform the valuable and necessary function of preparing students for a future they have predicted. They will go into business, operate radiographic equipment, pursue a career in law enforcement, and so on. General education enhances the possibility of success in these predicted futures. In every vocation and profession, the competencies developed by a good general education are valuable. But general education has the additional function of preparing students for a future that students and educators have not predicted, because it cannot be predicted. There is no certainty about personal and collective futures, except that they will be different from the present, and in many complex ways connected to the present. It is this connectivity that allows us as educators to make our bets about the future. In designing the form, content, and methodology of general education, educators assume that the knowledge general education imparts and the competencies it seeks to develop--such as reading and writing, critical thinking, and so on--are tools that will allow our students to act effectively and wisely in the future, because they are tools that promote effectiveness and wisdom in the present.

IV. Course Outlines

As indicated above, we recommend modifying Course Outlines so that course-specific assessment measures can be developed. This "course-embedded" approach has been employed at several institutions, including Alverno College and King's College. The King's College system is described in D.W. Farmer, "Course-Embedded Assessment Model."

Briefly, the procedure involves defining general education competencies and content areas, determining which of these should

be significantly developed in each course, and designing assessment measures (typically pre-tests and post-tests) specific to each course.

Course Outline Format

We recommend that the present Course Outline format be amended to include an Assessment Section. The model below assumes that other task forces may recommend that assessment issues be dealt with in the Course Outlines. It also assumes that many courses--i.e., not only liberal arts & science courses--may significantly contribute to the development of general education competencies.

Specifically, the following addition to the existing Course Outline format is proposed:

VI. Assessment

A. General Education

1) Competencies

[Competencies significantly developed in the course will be identified; the means by which these competencies are developed will be specified with reference to the objectives and content of the course.]

2) Knowledge

[If the course significantly develops knowledge in the central general education content areas, this will be indicated.]

3) Assessment Measures

[Specific assessment measures used to evaluate and report acquisition of competencies and knowledge will be described. These may commonly include pre-tests and post-tests specifically designed to evaluate learning in the competencies and areas of knowledge specified in '1' and '2' above.]

B. C. etc.--Assessment areas other than general education (Basic Skills, Specialized General Education Majors, etc.)

Implementation of Course-Embedded Assessment Measures

The following checklist outlines the key steps in the process of developing and implementing course-specific general education assessment measures:

1) Specific courses are identified for assessment;

   [Comments regarding principles to be applied in identifying courses are provided in Section VIII, below.]

2) Divisions identify general education competencies and content areas significantly developed in the courses;

3) Assessment instruments (pre-tests and post-tests, or other appropriate assessment measures) are designed by Divisions;

4) Course Outlines are revised;

5) Course instructors administer assessment measures;

6) Divisions collect and review the results;

7) Assessment data is centrally collected and reported as may hereafter be determined by the Dean of Academic and Student Affairs and the Campus Assessment Committee.

Assessment Measures: Objective Tests and Case Studies

The most common means of assessing learning in specific courses will be to test students upon entrance and upon exit from the course. As indicated in the inventory of General Education Competencies (Section VI, below), learning in the realm of general education may be classified into two principal categories: effective command of active skills (abilities to read, to write, to think critically, etc.) and knowledge of specific content areas (U.S. history, macroeconomics, developmental psychology, etc.). Content area knowledge upon entrance and exit from the course may be measured efficiently by means of 'objective' testing; so may some of the active competencies. For example, the ability accurately to read and comprehend a text characteristic of a given content area can be measured by objective testing.

However, some competencies--such as the ability to think critically--probably cannot be measured through objective testing. One solution to this problem is to ask students to respond to case studies specifically designed to evaluate particular competencies. If quantitative data is required, the written responses can be evaluated holistically on a one to ten scale by a board of qualified readers.

Therefore, we would anticipate that the pre-tests and post-tests for many courses would include two components: first, an objective exam measuring knowledge of the content of the course; and second, one or more case study problems requiring students to respond in writing.

The case study approach has long been used in schools of business and, more recently, has been employed in English composition. As suggested in some of the examples included in this report, we believe this approach may be effective both in testing competencies and in developing them. Readers unfamiliar with the approach may wish to consult Christensen's Teaching and the Case Method, McCleary's "A Case Approach for Teaching Academic Writing," and composition texts that employ this approach (e.g. Field and Weiss, Cases for Composition and Woodson, From Cases to Composition).

Two examples are given below to illustrate the application of course-embedded assessment procedures:

Examples: Assessing Critical Thinking and Quantitative Reasoning Competencies in PSY 101

Example One: Developing Critical Thinking Competencies in PSY 101, "Introductory Psychology" (associated competencies: reading, writing, research):

1) In PSY 101, students are introduced to the form, content, methodologies, and applications of research in the behavioral sciences. In the classroom, specific research studies are cited and their relevance to the topic being studied is explained.

2) An active understanding of the nature of research and an ability to think critically about such research can be developed by requiring students to submit a short report reviewing an experiment described in a published articles. Within this report, students would be required to answer the following four questions:

a. What was the purpose of the experiment?

b. What did the researcher(s) do?

c. What was (were) the findings(s)?

d. What are the implications of the findings?

3) Of particular importance in this assignment is the thinking involved in answering questions 'a' and 'd.' The former addresses the issue of "why" the researcher undertook the experiment, while the latter speaks to the issue of "so what." This assignment thus helps develop students' ability to evaluate arguments by authority, a key critical thinking skill, while also helping them to understand the critical thought processes that characterize research in general, and research in the behavioral sciences in particular.

4) APPLICATION:

a. Within Section V. A. 1 (Assessment/ General Education/ Competencies) of the PSY 101 Course Outline, "Critical Thinking" would be listed as a competency significantly developed in the course.

b. Course Outline Section III (Course Objectives) would indicate that the development of critical thinking skills is an objective of the course.

c. Course Outline Section IV (Course Content) would indicate that the evaluation and application of research is to be taught in PSY 101.

d. If Section VI. A. 3 (Assessment/ General Education/ Assessment Measures) of the Course Outline indicates that assessment will be carried out by means of pre and post testing of all students entering and exiting PSY 101, both instruments will include a case study problem measuring the applicable critical thinking skills of students registered in PSY 101.

f. Course Outline Section V (Evaluation) will specify that students complete a report critically reviewing a piece of published research as outlined above.

Example Two: Developing Quantitative Reasoning Competencies in PSY 101, "Introductory Psychology":

1) In PSY 101, a variety of opportunities exist to develop the ability to reason quantitatively. Consistently, instructors refer to statistical conclusions related to research findings being presented to the class. For introductory students, the undertaking of quantitative exercises early and throughout the course would increase their understanding of these conclusions

and enhance their ability to do something with these findings. Furthermore, exercises in quantitative reasoning would enhance their ability to examine critically the material being presented.

2) The following statistical issues would be appropriate for examination in PSY 101:

a. Calculation of measures of central tendency: mean, median, and mode.

b. Calculation of measures of variability: range and standard deviation.

c. Depiction of a frequency distribution using histograms or polygons.

d. Calculation of a simple correlation coefficient so as to understand the statistical relationship between two variables.

e. Graphical depiction of data on a scattergram.

f. Calculation of probability and analysis of it in relation to the concept of 'normal distribution.'

Advanced quantitative reasoning exercise:

g. Calculation of a t-test that examines statistical differences between two means.

3) APPLICATION:

a. Within Section V. A. 1 (Assessment/ General Education/ Competencies) of the PSY 101 Course Outline, "Quantitative Reasoning" would be listed as a competency significantly developed in the course.

b. Course Outline Section III (Course Objectives) would indicate that the development of quantitative reasoning skills is an objective of the course.

c. Course Outline Section IV (Course Content) would list the statistical issues summarized above as material to be taught in PSY 101.

d. If Section VI. A. 3 (Assessment/ General Education/ Assessment Measures) of the Course Outline indicates that assessment will be carried out by means of pre and post testing of all students entering

and exiting PSY 101, both instruments will include questions measuring the statistical reasoning skills of students registered in PSY 101.

e. To assure that quantitative reasoning skills are developed such that assessment measures would identify an improvement in such skills causally related to enrollment in PSY 101, instructors would supplement in-class demonstrations and examples with the requirement that students complete a short workbook setting forth statistical problems relevant to the subject of the course. Additional lab sessions for those students unable to complete the exercises without assistance would be arranged.

f. Completion of the workbook and of the competency exam would be required in order to receive credit and a grade for PSY 101.

Collateral Advantages of Course-Embedded Assessment Procedures

Assessment of general education competencies on a course-specific basis has many advantages, some of which have already been mentioned: the approach links assessment to instructional objectives via the Course Outlines and can be expected to encourage continued review and improvement of these functionally important documents; it encourages consideration of the general education curriculum in relation to a conceptual framework.

Another significant advantage concerns the ways in which competencies are actually learned. Although competencies in some of the basic areas, such as writing and mathematics, are the subject of specific courses in the COM and MAT curricula, there are limits to the efficacy of process courses.

In freshman composition, for example, the subject is writing, but writing is an activity that inherently demands a subject other than itself--a purpose other than writing for the sake of improving one's writing. Teachers of composition struggle with this problem in ways that are variously successful or unsuccessful. But they generally recognize that composition lacks a 'subject'--in the sense that literature or history has a subject--and that hence a subject must be provided, one way or another. The writing-across-the-curriculum movement responded to this problem by seeking to embed occasions to develop writing proficiencies within the contexts of a variety of subjects and disciplinary styles of thought and expression. If writing-across-the-curriculum is widely recognized as a noble idea that is extremely difficult to implement, it may be that assessment provides a new path to the same goal.

Most if not all of the active competencies will be most effectively developed if students are asked to use these competencies frequently, in a variety of courses, in relation to a spectrum of disciplinary concerns. The course-specific assessment approach encourages this objective in an orderly, structured manner. Thus students should not learn to write only in COM courses, and they should not learn to reason mathematically only in MAT courses. Essential as the focused courses are, they are limited in duration and in their ability to develop competencies.

Thus, while there may be room to develop a limited interdisciplinary core curriculum, there is evidence to suggest, for example, that a critical thinking core course teaching logic or problem solving would be less effective than a coherent attempt to develop critical thinking abilities within a wide range of courses that provide a variety of subjects for critical thinking (Meyers 5-8). The same argument applies to other general education competencies: they should be developed across the curriculum, not in the hot houses of courses such as Critical Thinking 101.

Finally, we believe that the process by which faculty develop assessment measures for specific courses is in itself important, as it ties assessment to the concerns and views of teachers. Teaching and learning are done by real and individual people, not by collective abstractions (the college, the faculty, the students). This vision of teaching, learning, and assessment is effectively described by Richard G. King, a Senior Fellow at the New England Board of Higher Education:

> The results of study are not universal. They differ from one mind and one field to the next. . . . Many different research skills are needed; many different sets of knowledge are required. Let the various disciplines or families of disciplines decide which requirements are appropriate and even attempt to measure them. The process of deciding how to measure certain aims, if genuinely participatory, may be more significant than a given set of results.
>
> Far better than providing a legislator or a trustee with a set of scores on an inappropriately universal test of 'knowledge' would be to give those same budgetary authorities an opportunity to discuss with faculty and students their views on the process of teaching and learning in given academic disciplines or curricular areas. A well-informed subjective judgment on a complex set of issues is apt to be more valid than some deceptively simple test score (50).

We have thus attempted in this report to provide an intellectual framework and an opportunity for teachers to make judgments about what should be assessed in specific courses and how assessment should be carried out. The discussion of competencies and the examples provided are directed to the end of helping to empower the faculty to participate fully in the assessment of general education; they are <u>not</u> directed to the end of predicting what the results of the process will be in relation to any specific course. We therefore see this report as helping the College to move to the starting line; the journey starts when the Divisions begin actually to consider how specific courses might develop general education objectives and how assessment of student learning in particular courses should actually be carried out. It has been practically necessary to provide the framework, but we would expect that the process will lead to an orderly modification of the framework, over time.

V. General Tests of Student Knowledge and Competence

Multiple means of assessment are required as part of the Five Year Outcomes Assessment Plan. Two principal formats for assessment exist:

1) Assessment may be conducted by using appropriate instruments to evaluate the competencies and knowledge of students upon entrance to degree programs and upon exit from degree programs. Testing may be required of all degree-seeking students, or testing regimens may be focused on particular programs.

2) Assessment may be conducted on a course-specific basis.

Although the approach we recommend emphasizes a course-specific approach to assessment, there is an important role for achievement tests administered to entering students and to prospective NCCC graduates. The rationale for such testing is as follows:

1) Achievement tests provide an assessment measure that can efficiently generate a large body of data concerning the knowledge and competency of students entering and exiting NCCC programs, allowing inferences to be drawn about the preparation and college learning outcomes of students over a period of time, and allowing other longitudinal studies to be performed if the data is entered into computerized student records.

2) Such tests will be necessary to supplement course-specific assessment procedures, for the following reasons:

a) The number of courses that can be assessed in a given year is limited.

b) The possibility of measuring changes in program quality by assessment of outcomes in individual courses is limited by the proposed policy of varying the focus of assessment procedures. Given the limited resources available, it is probable that assessment of a single course over a period of time will have a lower priority than assessing outcomes in a variety of general education courses.

c) Outcomes in any single course will be affected by the vicissitudes of staffing. The largest single factor affecting the learning of students is the instructor. Although the full-time staffing picture is fairly stable, turn-over among adjunct faculty is considerable. Many sections of general education courses are taught by adjunct faculty.

d) In the foreseeable future, NCCC will be committed to program requirements that specify liberal arts & science distribution requirements rather than a core curriculum consisting of a limited number of courses. This tends to limit the efficacy of course-specific assessment procedures, because of the number of permutations inherent in distribution requirements. That is, students may satisfy those requirements by taking very different arrays of courses, particularly in the humanities and social sciences. As will be suggested, this problem may be alleviated by regular assessment of COM 101 and of courses that many students take, such as PSY 101 and SOC 100. It may also be alleviated by curriculum and program developments. However, the fact remains that sole reliance on a course-specific assessment regimen would not adequately deal with the variety of ways in which program requirements are satisfied.

Therefore, we have recommended in the Five-Year Time Line (Section IX, below) that an achievement test measuring knowledge of the liberal arts & science disciplines and command of at least some of the active competencies (including writing, reading,

mathematics, and critical thinking or reasoning) be selected during 1990-91, and that testing using this instrument begin in the fall of 1991.

Such tests are becoming available. For example, "College Base" (The Riverside Publishing Company) provides scores in English (including Reading, Literature, and Writing); Mathematics (including General Mathematics, Algebra, and Geometry); Science; and Social Studies, as well as providing scores concerning the following competencies: Interpretive Reasoning, Strategic Reasoning, and Adaptive Reasoning.

Ideally, a test would be selected to fulfill both placement and assessment functions for incoming students. If this is not possible, the initial testing session, now used for placement purposes, will have to be extended. Exit testing might be conducted by making attendance at an assessment testing session a graduation requirement. Finally, decisions would have to be made about whether general education assessment testing should be required of all degree seeking students, or only of students seeking transfer degrees (the A.A. and A.S.).

Although we believe that it will be necessary to administer achievement tests to a broad spectrum of students upon entrance to NCCC programs and upon exit from those programs, we can make no specific recommendations regarding the particular test that should be selected. Neither can we determine how the other issues surveyed above should be resolved. These matters will require considerable research and discussion among a wide spectrum of interested parties.

VI. General Education Competencies

Many colleges and universities have attempted to analyze the phenomenon of general education by identifying various competencies. This is also the approach recommended in the AAC report on General Education (A New Vitality in General Education). In the context of assessment, the approach offers a useful perspective, because it focuses on developed abilities rather than on arid lists of curricular requirements.

An inventory of competencies reminds us that the object of higher education is to prepare students to engage in higher order tasks in what is commonly known as the 'real world,' a world that is presumably located spatially elsewhere than on college campuses and temporally in the future. In contrast, discourse about curriculum and program requirements often betrays a focus on the past: a student has taken COM 101. In terms of competencies, can he or she write effectively--now, tomorrow, next year? As Ralph Davis observes, "a great part of what we [as educators] do is

anything but future-responsive" (11), while the future before our students shows every sign of being far more complex and problematic than the very messy world we now inhabit.

We have identified two kinds of competencies. One focuses on active skills (for example, abilities to write, to speak, to read, and to think clearly). The other focuses on content areas (e.g. history, literature, psychology) as knowledge bases--not necessarily as metaphorical data banks, but as stores of knowledge that give the active skills materials on which to operate and contexts within which to exist.

For example, we believe it is impossible to think critically in relation to any field if one lacks a basic knowledge of the terminology and critical concepts of that field. One cannot think critically about current events without some historical consciousness; it is nonsense to imagine that one could think critically about economic issues if 'inflation' is an empty abstraction lacking in denotation.

General Education Competencies

We present below an outline of general education areas of competence and knowledge that can be related to curriculum and used to develop course-specific assessment procedures through the medium of the Course Outlines.

In the pages following the outline, objectives for development of competencies within these areas are discussed and a detailed analysis of each competency is provided.

Within the limits of the time and resources available to us, we have also provided examples illustrating how the competencies might be developed in specific courses. These examples are illustrative, not necessary substantive or prescriptive. They are intended to illustrate abstractions, to assist readers to imagine how the proposed system of assessment might work in practice, and to help faculty consider the pedagogical implications.

Obviously, it would be possible to define other--or additional--competencies. Equally obviously, analysis and discussion of specific goals and objectives will follow from this beginning, rather than being in any way foreclosed by this report. Outcomes are addressed in this report, but often in very general terms.

1. LITERACY

   1.A WRITING
   1.B SPEAKING
   1.C READING
   1.D USING COMPUTERS

2. CRITICAL THINKING

3. QUANTITATIVE REASONING

4. INDEPENDENT ACQUISITION OF KNOWLEDGE; RESEARCH

5. INTUITIVE AND IMAGINATIVE PROCESSES

6. ETHICAL AND MORAL PRINCIPLES; VALUE JUDGMENTS

7. SENSITIVITY TO OTHER CULTURES

8. CONTENT AREAS

1. LITERACY

We have subsumed four competencies within the heading of "literacy": the abilities effectively to write, speak, read, and use computers. The first three (writing, reading, and speaking) are traditional measures of literacy, fundamental competencies of any educated person. Indeed, one of the meanings of "literate" is, simply, "an educated person."

We have added computer literacy because it is becoming evident that an inability to process words and numbers using a computer will be, in the years to come, a limitation as profound and as disempowering as the more traditional forms of illiteracy.

These four competencies are treated separately below. Our discussion of them is prefaced by some observations about the responsibilities of all faculty teaching general education courses as these relate to literacy.

Literacy: Definition

What is 'literacy' as the term relates to our situation as college faculty teaching general education courses, whether we are teachers of biology, economics, history, philosophy, or psychology? Literacy is a competency to communicate orally and in writing, to read, and--we believe--to control computer technology **with the facility expected of a person who has received a college degree.** The definition is not as circular as it appears. Literacy may be measured in various objective ways, but in practice a person's literacy is measured by its effective application, as he or she communicates. For example, acceptable writing skills are validated by readers. Every faculty member who has ever complained that students cannot write competently confirms the truth of this observation.

The obligation to help students become fully literate falls equally on all faculty, whatever their discipline. There is reason to believe that this obligation is not universally accepted. For example, there is sometimes a sense that verbal literacy is the sole and special concern of English faculty, who are thus alone responsible to see that students read, write, and speak effectively. English faculty certainly have this responsibility, but it's not their 'job,' to the exclusion of the involvement of faculty in other disciplines. English faculty have objectives that are specific to their discipline, just as do accounting teachers, biology teachers, or history teachers. For example, while literacy is every teacher's concern, rhetoric is a disciplinary concern of the English faculty. Credentials in the discipline of English are necessary to teach rhetoric; such credentials are not necessary if one is to carry out one's professional responsibility to respond to students' writing as an educated reader. Colleges do not exist to educate students to write for English teachers; colleges exist to educate.

Therefore, the competencies below are discussed in terms of their relevance to the responsibilities of faculty teaching general education courses in a variety of disciplines. They are not discussed in terms of an exclusive relevance to the work of faculty teaching CIS, COM, or LIT courses.

This approach is all the more vital because, in assessment terms, we believe that these competencies are of such a nature that course-specific testing will be of limited--or even non-existent--validity. For example, Richard M. White asserts, "we have yet to come up with writing tests that are sensitive enough to be used as pre/post measures to quantify the value added to individual writing skill (out of a lifetime of language use) by a single writing course" (194). This is not what many people want to hear, and it may seem counter-intuitive. However, there is a broad-based school of professional thought within the discipline

of English supporting White's point of view, and we think it probable that he is right. Pre- and post-testing may reveal measurable statistical gains, but there are questions as to whether actual competency is being measured, and as to what portion of any gain is directly related to instruction in writing courses.

On the other hand, common sense tells us that concentrated attempts to develop literacy within a broad array of courses over a period of two or more years might produce measurable and valid gains in literacy. This seems a reasonable hypothesis, and far preferable to the alternative positions, which include letting the English faculty alone provide--or even just giving up.

1.A WRITING

A 'writing crisis' has been evident for at least a decade, and not just at open-admissions colleges. At UCLA in 1979-80, Richard A. Lanham discovered a familiar situation:

> The students had done very little writing in high school. The problem began there and, in the long run, would have to be solved there. Be we also found, to our surprise, that students did amazingly little writing at UCLA. And that small amount of was shrinking fast to a diet of hour tests and exams. Even here the essay exam was feeling pressure from the factual inquisition. We found everywhere we went that people felt they had a new, and bad, problem with student writing (153).

The problem today is not so new--but just as bad--at most institutions of higher education, including NCCC.

As will be argued in our discussion of critical thinking, below, "factual inquisition" is of limited utility in developing any active general education competency, as are the teaching and testing techniques reductively suggesting that learning is equivalent to the development and exercise of the cognitive memory. Writing encourages a precision of thought that is essential to developing critical thinking competencies. However, in the first instance we need not focus on the various ends to which writing is a means (such as developing critical thinking or evaluating a student's ability to deal with a body of knowledge or set of issues by summarizing, synthesizing, or critically judging). If, as is almost universally acknowledged, writing is a central and essential competency of an educated person, the first step that teachers of general education courses can take to develop this competency is <u>to see that their students do more rather than less writing</u>.

The argument that essay tests and other forms of writing cannot be fairly evaluated because faulty form somehow hides content that the instructor believes to exist in the students' heads--if only that content could be expressed--is intellectually disreputable and indefensible in relation to any imaginable philosophy of general education. Equally unhelpful is the cruder argument that writing is indeed beyond the abilities of many students. The proper response to the 'writing crisis' is surely not to give up, surrendering to sub-literacy. No college could endorse such a position, unless its secondary role as an issuer of credentials has wholly subsumed its sense of primary educational mission.

Therefore, the first consideration regarding writing competencies is **quantitative** (the **qualitative** considerations will be dealt with below). Writing is an active skill. Like learning to play tennis or learning to drive a car, it cannot be learned simply by watching other people perform--nor by being told how the activity is performed, nor by reading about how the activity is performed. Command of active skills requires practice. Up to a certain point, which we believe most colleges come nowhere near reaching, students will become better writers to the degree that they write regularly, copiously, and in response to a range of writing situations that make varying demands on them as writers. Teachers of general education courses should thus examine the courses they teach with an eye to requiring their students to write frequently and in response to a variety of writing situations (essay exams, reports, critiques, short in-class response or position papers, etc.).

Turning to the qualitative considerations, we encounter first the issue of instructors' perceptions of their own competencies to teach and to judge, if their credentials are in fields other than English. We have addressed this issue in our general comments about literacy, above. In a very real sense, faculty can affect the quality of writing simply by letting students know when formal deficiencies are apparent to faculty, as educated readers.

Formal deficiencies are of two categories: those that obscure content (e.g., problems with coherence, unity, or insufficient development), and those that are mechanical or purely formal (minor spelling problems, typos, failure to capitalize proper nouns, and so forth). At a certain point, of course, this distinction loses its sharpness; punctuation may appear to be a matter of mechanics, but if too many of our expectations regarding punctuation are violated, the effort to extract the meaning becomes too demanding, and the ambiguities of interpretation begin to pile up. In reality, every rule of usage has a functional reason for being.

As a practical matter, either category of formal deficiency becomes significant when the reading experience of an educated reader is affected to the degree that he or she can locate the problem in the text. The issue is consciousness of deficiencies, not correcting them or explaining exactly what rule of English grammar, syntax, or usage has been violated. Faculty do not need to make a paper bleed red with corrections. They **do** need to communicate in whatever way is most comfortable for them, individually, that as educated readers they have been puzzled, annoyed, or made to exert too much effort just to follow the sense of the writing. This is not an either/ or proposition: the choice is not between being an English teacher and ignoring every qualitative deficiency, no matter how evident. In terms of pop psychology, students need the feedback of all their teachers when it comes to writing; this feedback should reinforce learning experiences specifically dedicated to developing writing competencies. It is destructive of the students' interests to have one faculty member suggesting that it is important to use a dictionary--or a good computerized spell-checker--while another faculty member completely ignores egregious spelling problems. Mixed messages are usually interpreted to the perceived benefit of the person receiving them; we can guess where students come out on this issue.

It is certainly probable that instructional development efforts, workshops, and so on can assist general education faculty to respond to qualitative writing problems. However, we see no need to endow the issue with a mystery that does not in fact exist, or to risk having general education hung up on the numerous rocks that have wrecked many a writing-across-the-curriculum program.

We believe there are considerable gains to be made from a simple, common sense approach: students need to write more, and they need to have educated readers--not necessarily just English teachers--respond to the form and content of their writing. This response can be as simple as circling obviously misspelled words or careless mistakes, indicating that one can't understand the argument, or suggesting that a particular sentence doesn't make any sense. There is no need to analyze why a particular sentence doesn't work, or to explain the principles that would have produced an effective sentence, or to revise the sentence for the student. If a teacher is comfortable providing the analyses and the explanations, fine. But responsiveness is more than half the battle, particularly as students with serious writing problems can and should be advised to seek help at the learning assistance center. Technical resources are available.

This approach assumes that educated readers have parameters of tolerance with regard to the presentation, form, and content of writing that students will in various ways stay within or exceed. As teachers, we need to indicate where students stand in relation to our actual individual experiences as educated readers. In the

'real world,' the test is more demanding. As we all know, we will read or not read, be persuaded or not be persuaded, as a function of whether the benefit we derive from reading a text is in keeping with the effort required to read it. Both form and content are involved in the resolution of this equation; in writing, form and content are organically related. We make these judgments experientially, every time we pick up a book, article, memorandum, or report. We can help students understand this fact of life by being responsive readers. We believe students will improve as writers to the degree that their writing has been responded to by a variety of readers that students know and respect. Faculty have that role, and therefore have the competence to help students improve writing abilities.

Outcomes

Graduates will be capable of:

1. Presenting written work in a format appropriate to collegiate standards.

   Faculty will encourage students to type or word-process all formal written assignments. The text will be double-spaced, and adequate margins will be allowed. If the text is handwritten, it will be written on every other line using blue or black ink. Adequate margins will be allowed, and only one side of the page will be used. Illegible or carelessly prepared writing will not be accepted.

   Standards for the presentation of written work will be promulgated with the understanding that sloppiness and carelessness are unacceptable. Students will not magically acquire an attitude of careful attention and pride in their work when they enter the work force, if such an attitude has not been previously encouraged. Appearances matter--a lot.

2. Avoiding gross and repeated spelling errors.

   The use of computerized spell-checkers will be encouraged. However, even the best of the presently available programs have a limited sensitivity to context (generally restricted to identifying simple repetitions). Students need to be aware of these limitations; they must understand that computers are not intelligent, and that spell-checkers and other computerized aids to writing do not obviate the need for careful and intelligent reading and proofreading of texts.

3. Using appropriate diction.

   Words are selected with an eye to precision (an important criteria for critical thinking), with an awareness of the distinction between denotation and connotation, and with an awareness that there are levels of diction. Slang and street talk are unacceptable in collegiate writing.

   With regard to precision, Mark Twain is worth quoting. Twain said that there were at least nineteen rules for effective writing. The thirteenth rule should be familiar to every NCCC graduate: "use the right word, not its second cousin" (584).

   Students will need an effective command of the skills required to use a dictionary, not to spell, but to identify precise meanings. They should also be able to use a thesaurus.

4. Avoiding gross and repeated violations of the rules of English grammar (such as obvious agreement errors).

5. Avoiding gross structural problems at the sentence level: obvious fragments, comma splices, and run-on sentences.

6. Writing coherent and unified paragraphs, as apprehended by educated readers.

   Coherence refers to order, the existence or non-existence of a 'train of thought.' Unity refers to relevance or irrelevance.

   "Topic sentences" are a normative means of facilitating coherence and unity, but in reality not every paragraph has an explicit topic sentence; the function rather than the formula (simplistically, 'always begin with a topic sentence') is important.

7. Writing coherent and unified multiple paragraph texts.

8. Adequately developing texts, relating assertions and evidence, principles and examples, the general and the specific.

9. Demonstrating an ability to write in a variety of genres, academic and non-academic.

   The formal and stylistic assumptions that characterize academic writing in the natural sciences or the social sciences differ--for example--from the formal and stylistic assumptions that govern writing in the humanities. Students' reading and writing experiences

should develop some degree of sophistication regarding the range of generic characteristics evident within the liberal arts & sciences and other academic disciplines.

Therefore, graduates should have some ability to write texts that conform to the generic requirements of various academic writing assignments: the critical essay, the report, the term paper, and so forth, as these requirements are apprehended by educated readers who identify with a range of academic disciplines.

Similarly, students should have at least a basic grasp of the generic characteristics of 'business writing' (which is something of a misnomer because the letter, the memorandum, and the report are essential to communication and organizational empowerment in a variety of contexts within the private and public sectors).

10. Avoiding plagiarism and using acceptable forms of documentation of sources (see section on research competencies, below).

11. Demonstrating that they understand the ethical responsibilities of an author.

    The writer is responsible for the form and content of what he or she writes. Unless a collective or multiple authorship is explicitly acknowledged, the person identified as the author of a text is understood to be the sole creator of that text.

    Faculty are not editors; students are not Thomas Wolfes, geniuses--or even busy professionals--whose texts are 'improved' by editing.

    Pedagogical techniques that blur the principle of authorial responsibility are reprehensible. It is certainly possible to teach any general education course, including freshman composition, while carefully distinguishing between what was written by the student and what was written by the student. Similarly, Learning Assistance Center personnel must never edit a text so that a reader may be unable to identify who is <u>responsible</u> for its form and content. Again, no diminishment of the ability of Learning Assistance Center personnel effectively to fulfill their function is implied by this proviso.

12. Controlling the process of writing in relation to the objectives outlined above.

    Writing is understood to be a process that involves duration. It has a beginning, a middle, and an end. In highly schematic terms, the writer moves from a pre-writing stage (exploration and invention, research, outlining and planning), to a drafting stage, to a revising and editing stage.

Example: Developing Writing Competencies in PSY 138, "Psychology of Human Relations" (associated competency: critical thinking):

The following writing assignment is included in Field's Cases for Composition (115-16):

> Your first choice, the college that you really want to attend, includes in its application form the kinds of questions that you had expected, but adds another unexpected question. Its admissions office lists twenty-two ideas of "success" and requests that you write an essay identifying which three are most important to you and explaining how important they are. The list is as follows:
>
> 1. Being able to influence others
> 2. Having artistic skill
> 3. Having respectable and responsible children
> 4. Being competent intellectually
> 5. Having opportunities for risk and adventure
> 6. Having power over machines (e.g., repairing a car, programming a computer)
> 7. Being loved
> 8. Possessing objects that give pleasure (a fine car, a hand-carved chess set, a Picasso sketch, etc.)
> 9. Enjoying an active and satisfying sex life
> 10. Participating in socially significant activity
> 11. Being intellectually stimulated
> 12. Winning approval of the opposite sex
> 13. Achieving prestige
> 14. Being physically attractive
> 15. Being able to initiate and sustain friendships
> 16. Belonging to and feeling loyalty to a group (e.g., a fraternity or sorority, corporation, religious or ethnic group)
> 17. Being flexible, able to bounce back
> 18. Enjoying a close and supportive family life
> 19. Pursuing a satisfying career
> 20. Being able to give love
> 21. Engaging in satisfying athletic activity
> 22. Being comfortably wealthy

[Many examples cited in other sections of this report are also relevant to writing.]

1.B SPEAKING

As Walter Ong reminds us, we are "leaving the Gutenberg era behind us" (221). The shifting roles of print communication and oral-aural communication have multiple and complex cultural implications, as a number of scholars have pointed out. We would hope that there will be opportunities within the general education curriculum to explore some of these cultural changes.

This goal, and other more immediately pragmatic goals, will be advanced to the extent that students develop an ability to speak effectively in public as well as private contexts. A native command of English does not necessarily confer an ability to communicate effectively in committee meetings or formally to address a group. These are, of course, tools facilitating empowerment. Students can learn to use them.

As in discussion of the other areas of literacy, our focus is on extension of the responsibility to develop competencies beyond the locus of courses dedicated to these ends (such as COM 121). In general, a stronger emphasis on active rather than passive learning--implying more frequent use of properly managed discussion and questioning periods--should increase the number of occasions on which students are required to speak to a group. As is the case in all the processes subsumed under the category of literacy, quantitative as well as qualitative considerations apply. The ability to speak effectively will be improved to the extent that students have to speak. Qualitatively, critical thinking competencies--in particular--affect the form and content of communication, whether written or spoken. It is generally the case that the general education competencies are connected; they coexist and interact within our students' heads--and ours. The

qualitative criteria are those of educated listeners. Faculty need to be <u>responsive</u> in sharing judgments made according to those criteria, fulfilling the constructive and positive roles of a critic.

<u>Outcomes</u>

Graduates should be capable of:

1. Speaking with confidence and poise in organizational or public settings.

2. Analyzing audiences in terms of basic communication theory.

3. Planning and organizing a speech.

4. Demonstrating a command of critical listening skills.

5. Speaking effectively within a variety of academic and non-academic contexts, so that--for example--they can represent interests and persuade within committees or deliver an effective oral report to a class.

1.C READING

Because the results of weak writing skills are evident to faculty as readers, the 'writing crisis' is widely recognized. Faculty see the primary evidence: sub-literate writing on essay tests, reports, and so forth. On the other hand, manifestations of weak reading skills are less immediately evident. There is no primary 'product.' For most teachers, the evidence concerning students' reading abilities is tenuous and secondary; it appears in the students' ability to perform on whatever evaluative instruments are used to measure learning in a particular course.

Many educators have formed the subjective impression--backed up by some objective evidence--that students' reading skills are often critically weak. In pragmatic terms, students' abilities to comprehend material presented in their textbooks and other course-related readings often seem insufficient for them to meet rigorous learning objectives in many disciplines.

Thus reading may be identified as a competency that is usually uneasily assumed to exist rather than confronted as an issue in itself. Yet liberal arts & science courses normatively require students to read texts that are frequently 'dense' and complex in content, and often rhetorically complex or subtle in form.

Again, increased emphasis on active learning should lead to a more active relationship to texts. Classroom activities should complement assigned readings, rather than leading students to conclude that they don't have to read the texts because the teacher will 'cover' what is 'important' in the lecture. Evaluation methods also affect students' reading abilities. In extreme cases, students quickly discover that they don't have to read the text at all, because exam questions are based on lecture notes rather than learning objectives that could only have been met by reading the text.

Encouraging and motivating students to read more, and to read more carefully and critically, will improve reading competencies. In more instrumental terms, there are abundant opportunities within a spectrum of classes to require students to paraphrase and explicate texts.

Outcomes

Graduates will be capable of:

1. Comprehending college-level textbooks, based on:

   a. familiarity with the generic characteristics of textbooks;

   b. command of reading methodologies (skimming and scanning, previewing, etc.);

   c. familiarity with the standard organizational modes of paragraphs (development from or toward a generalization, etc.)

   d. possession of an adequate passive vocabulary;

   e. familiarity with the function of special terminology in academic disciplines;

   f. command of discipline-specific reading skills (such as the ability to understand mathematical symbols, scientific symbols, charts and diagrams, etc.)

   g. a basic understanding of the modes of figurative language.

2. Reading actively and responsively (taking notes, 'reading with a pencil.'

3. Reading critically (recognizing inductive and deductive reasoning, recognizing propaganda, applying critical thinking competencies to texts.

4. Reading with reasonable comprehension texts written for a professional audience. [Textbooks should be supplemented with additional readings that allow students to see how--for example--historians write when they are writing for other historians.]

Example: Developing Reading Competencies in HIS 102, "Western Civilization II":

In a discussion of the Soviet leaders of the 1917 Revolution, George F. Kennan makes the following observation:

> The image of reality against the background of which the political fanatic plays his part is always largely artificial. He creates it for himself; but he believes in it implicitly, and in part he generally succeeds in making it seem real to others as well. And his role, as he plays it, may be none the less heroic and impressive for this artificiality of the scenery (61).

At one of the frequent points in the study of modern history when political fanaticism might be dealt with, perhaps in connection with a discussion of the rise of nationalism and the appearance of various political ideologies, students might be asked to read the above passage. Having carefully read the passage, students should be asked to paraphrase and explicate its meaning, either verbally or in writing. What is Kennan saying about the psychology of the political fanatic? Kennan makes a series of precise, subtle points. In attempting accurately to comprehend Kennan's writing, students may be expected both to develop the competencies needed to read serious works of history or political analysis--as opposed to textbooks--and to confront a view of political fanaticism that may illuminate both the past and the present.

1.D USING COMPUTERS

Computers are prodigal consumers of money and space. The most important limitation on the development of a competency to use computers concerns facilities. Despite considerable progress in recent years, there are not enough computers available for use by students and by faculty. The degree to which this is a serious problem varies among the campuses and instructional sites.

There are of course other limiting factors. When most of the faculty were receiving their educations, computers were hidden in basements and tended to by specialists. When we were taking courses and writing dissertations and theses, most of us didn't feel deprived if we had to use a typewriter. Now, if we have gained the power to control a PC, we think, 'if only. . . ." Developments during the past ten years in computer technology and marketing--and the social and professional consequences thereof--are a striking illustration of one of the principal themes in our philosophy of general education: that education must be responsive to an unpredicted and unpredictable future. The next generation of college teachers will not have to learn about

computers after they have entered their profession. Undoubtedly some other fruit of technology will come along to confound and challenge them.

It is therefore unsurprising that the application of computers to education is still theoretically and practically an immature field. Early suggestions about the benefits and possibilities of computerized instruction now appear hopelessly naive; so too, we should imagine, will the present state of the art appear naive ten or twenty years from now--which is not to denigrate the many very interesting developments of recent years. [For example, computers appear to be effective in helping students to write effectively. For a fairly recent survey and bibliography, readers may consult S. Davis (337-92).]

In view of these considerations, we include using computers as a general education competency not so much because a great deal more can be done now, with the physical and human resources available, but because we are confident that more and more will be done in the years ahead. Within the limitations of existing facilities and staffing resources, we support making CIS 100 accessible to as many students as possible, and we support present and future efforts to develop computer competence in other courses.

In addition, we believe that some degree of sophistication about what computers can and cannot do is necessary to think critically and to make value judgments about a variety of contemporary issues. As Turkle observes, "computers are not good or bad; they are powerful" (323). At the conceptual level, it is important that our graduates have considered issues such as the ends to which computers are powerfully used to store and process information. Empowering as many of them as possible to control computers as means of carrying out specific tasks will contribute to this goal, as well as providing very practical skills.

For assessment purposes, we recommend questioning students upon entrance and upon exit from degree programs to ascertain if and how their attitudes toward and knowledge of computers changes over the course of their NCCC experience.

Outcomes

Graduates should be capable of:

1. Demonstrating an ability to use computers at a basic operational level, such that they can turn on the machine and use at least one application, such as performing simple word-processing.

2. Demonstrating a basic understanding of the operational principles of computer technology, so that they can explain the relationships between hardware and software (including disk operating systems and application software).

3. Demonstrating a basic understanding of the principal categories of computer applications, such as word-processing, data storage, graphics, and spreadsheets.

4. Demonstrating that they have acquired an ability to learn new application programs. [Because of the plethora of programs available, it is particularly important that students learn how to learn new programs; a number of strategies for so doing exist, and we suspect that the efficacy of these varies from individual to individual.]

5. Demonstrating that they have considered the cultural and social implications of computer technology. [Access to and control of information is intimately related to power in a modern technological society. Information may be employed to socially constructive or socially destructive ends.]

2. CRITICAL THINKING

An unidentified acquaintance of General George Armstrong Custer once observed, "He was no philosopher; he could reel off facts from his mind better than he could analyze or mass them. He was not a student, nor a deep thinker" (Connell 211-12). We all know what happened to General Custer.

If one is going to understand and react effectively to complex situations, the ability to think critically is a survival skill. We have not educated our students if we equate learning with the simple process of being able to "reel off facts." Critical thinking skills are not developed in courses where the single most important pedagogical objective appears to be to prime students to score well on multiple-choice exams.

Active vs. Passive Learning

A distinction between active and passive learning is useful to the understanding of critical thinking. Characteristically, passive learning environments exist when the following conditions are present:

--Lectures occupy a high percentage of classroom contact time;

--Lecture content (often supplemented by detailed outlines and summaries communicated to the students via transparencies or extensive notes written on the board) consists of masses of facts, definitions, and other material suitable for memorization;

--Facts, definitions, and the like are not adequately synthesized or given a context within the lecture;

--Faculty communicate the expectation that students will take copious notes about the content of the lecture, often emphasizing word-for-word recopying of material presented via transparencies or blackboard notes, such that in extreme cases the students more nearly emulate medieval scribes copying sacred texts than they do college students;

--Learning is principally evaluated by means of 'objective' examinations that evaluate students' ability to recall the detailed contents of their notes.

This pedagogical pathology is immediately recognizable to many faculty, who question students and use discussion sessions to increase 'class participation.' These techniques offer the promise of leading students actively to manipulate ideas while encouraging students to participate in their own education rather than placing them in the infantile position of asking to be fed 'the facts' or 'the truth.'

Participatory Learning: Questioning

Questioning in itself may or may not develop critical thinking skills. In a study reported by Carol P. Barnes, the Aschner-Gallagher System for Classifying Thought Processes in the Context of Classroom Verbal Interaction was used to classify questions actually asked in a sample of forty college classrooms (62-65):

--**Cognitive Memory:** Recapitulative, clarifying, and factual questions;

--**Convergent Thinking:** Questions of translation, association, explanation, and conclusion;

--**Divergent Thinking:** Questions asking students for responses that elaborate, implicate, and synthesize;

--**Evaluative Thinking:** Questions asking students to rate, judge, and qualify;

--**Routine Questions:** Questions related to classroom management; rhetorical and humorous questions.

In classes monitored for this study, only 3.65% of classroom time was used to ask questions of students. Furthermore, nearly 63% of the questions were classified as related to "Cognitive Memory." The conclusion drawn in "Professors Part of the Problem?", an abstract of Barnes' research, is that "quite bluntly, professors ask few questions which require students to think." Obviously, one must have a memory in order to be able to think, but a practical understanding of critical thinking must be based in part on a distinction between using one's memory and thinking. These processes are not synonymous.

Participatory Learning: Discussion Sessions

Neither do discussion sessions necessarily develop an ability to think critically. As is the case when one increases class participation by asking questions, discussion in itself may be valuable or worthless in motivating students to think.

We believe that critical thinking competencies may be developed in classes where discussions are structured and guided. A variety of techniques are available to provide structure and guidance.

A general discussion period open to all members of the class will be valuable if the instructor sets a clear agenda for the discussion and actively guides the discussion. This guidance should not reduce the discussion to a series of dialogues between the instructor and individual students; a true discussion will ensue when students respond to each other as well as to the instructor. Yet the instructor must have a clear sense of the objectives of the discussion period, and he or she must see that these objectives are met. Finally, the instructor must summarize, providing closure to the discussion.

Another common approach is to break the class up into small discussion groups responsible for dealing with a specific issue and reporting the results of their discussion. This can be an effective technique, particularly if the task set for the discussion groups is clearly defined and if the instructor helps the groups efficiently to operate by giving them a specific

starting point: i.e. 'begin by deciding whether. . . . ' Further information on effective discussion techniques is available in Eble (54-65), Frederick (211-16), and Meyers (58-68).

These points are developed to suggest what may be obvious: critical thinking skills are most likely to be learned in classrooms where students are asked rigorously to think. To learn to think, one has--of course--to think. Students who leave a classroom with reams of notes, empty pens, and tired fingers (at one extreme), and students whose teachers preside over 'bull sessions' (at the other extreme) have not been asked rigorously to think. If in practice many of our students are not asked to think, the fault may lie with instructors who lack the knowledge, skill, energy, commitment, or courage to ask them to think. All of these elements are pertinent, because thinking has unpredictable results. Faculty who know everything that's going to happen in a class, because they have it all written in their lecture notes, may variously lack the knowledge, skill, energy, commitment, or indeed courage to deal with the unpredictable results of critical thinking.

Critical Thinking: Definition

As the taxonomy employed in the Barnes research suggests--and as numerous other theories also suggest--there is a hierarchy of higher order thinking processes. Theoretical approaches vary in quality and in applicability to specific teaching situations; what they have in common is the message that critical thinking is a term used to denote a cluster of higher order intellectual skills that require the active manipulation of knowledge and of ideas to some specific end. In practical terms, a mind competent to think critically can, unlike General Custer, "analyze or mass" facts and apply conclusions and principles to unique problems and situations. In logical terms, critical thinkers can apply inductive and deductive logic to real problems. In terms of process, critical thinkers solve real problems by:

(1) recognizing and defining the problem

(2) gathering information

(3) forming tentative conclusions

(4) testing conclusions

(5) evaluating and making decisions (Meyers 4)

This cluster of skills is closely related to other essential general education competencies, notably including reading, writing, and quantitative reasoning. We do need to remind

ourselves that a brain is a single organic whole of fantastic complexity, and that every theory of learning represents a set of generalizations about the twenty or thirty brains in the average classroom. Yet we need not entangle ourselves in what is known or not known about the organic functioning of the brain; its hemispheres, synergism and feedback loops; and so forth. It is more practically useful to complete a definition of critical thinking by reviewing a menu of skills that can be said to involve critical thinking and that might include:

Solving Problems

Constructing Arguments

Making Connections

Comprehending Meanings

Evaluating Propaganda

Or, to move to a more specific level, critical thinkers are able to:

Use the logical process of induction, testing generalizations by evaluation of the quantity and quality of the evidence supporting the generalization;

Use the logical process of deduction, drawing specific conclusions from general principles;

Evaluate arguments by authority and expertise; recognize the limits of authority and expertise;

Recognize and discount common logical fallacies;

Recognize the roles of emotion and reason in judgment and persuasion, and discount arguments that misuse emotion (e.g., **ad hominem** arguments);

Recognize and discount argument by connotation (manipulation of an audience or readership through the use of words that have powerful positive or negative connotations and--frequently--abstract denotations);

Apply rules of intellectual evidence, differentiating among facts, judgments supported by evidence, and unsupported opinions;

Precisely define, understand, and manipulate ideas, so that they are able to discriminate--i.e. not confuse apples with oranges;

Evaluate statistical evidence;

Use the scientific method practiced in the natural sciences and evaluate conclusions drawn by the application of this method;

Use the methods of critical analysis practiced in the the humanities and evaluate conclusions drawn by the application of this method;

Use the empirical method practiced in the social sciences and evaluate conclusions drawn by the application of this method.

The Process of Critical Thinking

Implicit in the definition of critical thinking competencies is the identification of critical thinking as a process. For example, in an analysis of how critical reading competencies may be developed, Mayer and Goodchild define critical thinking as "an active and systematic attempt to understand and evaluate arguments." They break down this definition into six parts (4):

1. **Critical thinking is an active process.** Students need to 'search' for meaning in what they read; they need to ask themselves, "Does this make sense?"

2. **Critical thinking is a systematic process..** In a step by step manner, students need to approach their reading in a logical way so as to make sense out of it.

3. **Critical thinking is based on argument.** Students must be able to recognize the components of an argument--the assertion and the evidence being presented. Critical thinking involves analyzing arguments to identify their components.

4. **Critical thinking involves understanding arguments.** Students will not only recognize the argument being presented, but will also be able to state it in their own words.

5. **Critical thinking involves evaluating arguments.** After recognizing and stating the argument, students will be able to criticize it. Is the argument valid and should I accept it?

6. **Critical thinking is an attempt.** Analyzing arguments is a general approach to better understanding and evaluating what one reads. A correct answer is not always produced.

As a process, critical thinking involves identifying and analyzing arguments. Arguments may be defined in various ways. In psychology, "an argument is a statement describing the world (assertion) along with empirical support (evidence) and theoretical support (explanation) for the statement" (Mayer 9). The assertion is "a general description of the characteristics of one or more things or the relation between two things." The empirical evidence is "specific observations that support or refute the assertion." The theoretical explanation is "a hypothesized mechanism or model that logically justifies or refutes the assertion" (Mayer 9-10).

As a critical thinker examines an idea or reads a textbook, the systematic analysis of the arguments will be undertaken. Once this has been done, the next step is that of evaluating the assertion, evidence, and explanation. At this point we must ask the student to wonder "what's wrong with the assertion? the evidence? and the explanation?" Criticism of these components leads to the formulation of important questions about the assertion and about how research was undertaken. Furthermore, students may begin to generate alternate theories to account for the evidence.

Critical Thinking and Content Areas

Obviously, critical thinking cannot exist in isolation from knowledge. Knowledge may be acquired by reading, by listening and taking notes on lectures, by participating in discussion sessions, by listening to and viewing audio-visual materials, and so on. Our emphasis in this section is to argue against assumptions that are commonly unstated but that seem to lead directly to a passive rather than an active approach to learning. We should not assume that knowledge, as it may be measured by objective testing, is equivalent to understanding, and still less should we assume that retention in the memory of a body of knowledge necessarily leads to an ability to think. These principles may be illustrated by analysis of the following passage from a work of political argumentation, Jean-Francois Revel's How Democracies Perish:

> [1] Henri Bergson distinguished between two types of memory, habit-memory and recall-memory. In the former, the past is preserved but blended into the present so that we can use it automatically in daily life. The latter preserves the past as such, the past delimited in time, the memory of a unique and original experienced that happened at a specific moment of our lives. . . . Habit-memory enables us to circulate unerringly in a familiar city while thinking of something else. Recall-memory brings back our beginnings in that city, when it was new to us and we were getting to know it. [2] I think this psychological distinction can be applied to politics: in the

> democratic countries' historical consciousness, communism's past is part of habit-memory, capitalism's of recall-memory.
>
> [3] As things are now, it seems that only the West's failures, crimes, and weaknesses deserve to be recorded by history. Even the West accepts that rule. The ordeal of capitalism's Great Depression of the 1930s still haunts historians, journalists, politicians, and Western schoolbooks like an indelible stain on the capitalistic system. . . . But the deaths of tens of millions of people as a result of a direct, deliberate policy of Communist leaders in the Soviet Union during the forced collectivization of the Soviet Economy in those very years, from 1929 to 1934, have only a vaporous reality in the West's historical memory, as objects of scholarly curiosity (318).

The opening sentence of this passage [1] could be taken directly from a fill-in-the-blank test: "Henri Bergson distinguished between two types of memory, _____ and _____." One either knows the answer, or one doesn't. If one does know--and indeed understand--Bergson's division of memory into two categories, there is still no assurance that one can apply this knowledge to any problem, that one can do anything with it. In the passage above, Revel first introduces this bit of knowledge and explains it for readers who don't retain the knowledge in their memories. At [2], he begins to do something with it: he applies this "psychological distinction" to politics. Having introduced the application, at [3] he asserts that the application helps explain supposed perceptions of the traumas undergone by capitalism and communism during the 1930s.

The example illustrates one of the many structures of critical thought based on knowledge. Thought moves; knowledge is inert. To think critically, one must have knowledge, but having knowledge doesn't assure an ability to think. A pedagogy with objectives that reach no further than teaching and testing so that students have the cognitive knowledge necessary to tell us how--for example--Henri Bergson classified kinds of memory will not develop critical thinking competencies.

Finally, it should be pointed out that comprehension and critical judgment of Revel's extremely problematic argument would require understanding of a complex set of concepts and historical facts and interpretations. For example, what is "historical consciousness"--what is the denotation of this abstraction? This understanding is unlikely to be present in the minds of students whose learning styles are passive. We may reasonably doubt whether most of our graduates could come within ten or twenty years of dating Stalin's forced collectivization policies, if indeed they have ever heard of them. But even if graduates

can correctly identify or date historical events such as the Great Depression, World War II, the Holocaust, the Great Purge, and so on within the format of an objective test, that would be no cause for celebration, if the means by which this was achieved developed simply the required knowledge, and not the competence usefully to understand something of the nature of these events, or the ability to think about their meaning and application to the present and the future.

Critical Thinking and Writing

As critical thinking requires precision of thought, it is not surprising that writing--as a means of communicating ideas carefully and precisely--is important to the development and assessment of the critical thinking competency. More fundamentally, the precise use of language is organically connected to precision of thought, such that the relationship between linguistic competencies--and particularly the writing competency--and critical thinking is a version of the 'chicken and the egg' conundrum. As Wayne Booth points out, the Aristotelian analysis of rhetoric emphasizes a process of discovery or invention--of thinking. Thus "rhetoric . . . is not a dressing added to the case to make it persuasive; the rhetorician discovers the case itself, using the art of rhetoric as an art of discovery" (31).

However, writing per se may or may not develop an ability to think critically. As Meyers notes, "in assessing critical thinking abilities it is often as important to know how a student arrived at a conclusion as it is to know the conclusion itself. Assignments in critical thinking should give students opportunities to puzzle over issues, to sort things out, and to formulate their own independent judgments" (69). Traditional term or research papers, Meyers argues, will usually fail to provide such opportunities, in part because of "imprecise instructions": the word 'analyze,' for example, has a number of meanings to most students, many of which will not produce critical thinking (70). Similar considerations apply to a number of traditional writing assignments. Meyers (72-74) suggests the following guidelines for development of written assignments:

--Stepwise Development of Skills (involving a process approach to the development of critical thinking process, using a series of short assignments);

--Focus on Real Problems and Issues;

--Clear, Unambiguous Instructions.

In applying these guidelines, Meyers recommends five categories of written assignments: brief summaries, short analytical papers, problem-solving exercises using popular media, outside projects, and simulations (74-86).

The Critical Frame of Mind

Finally, it should be pointed out that in actuality critical thinking requires a critical disposition, a questioning habit of mind that can only be developed by repeated, rigorous applications of the critical point of view. The following guidelines, offered by Wade (3), illustrate the degree to which the process of critical thinking depends on a disposition to be critical in one's approach to analysis and problem solving:

1) Ask questions; be willing to wonder.

2) Define the problem.

3) Examine the evidence.

4) Analyze biases and assumptions--your own and those of others.

5) Avoid emotional reasoning.

6) Don't oversimplify.

7) Consider other interpretations.

8) Tolerate uncertainty.

Similarly, Ruggiero emphasizes outcomes that focus our attention on attitudinal or affective characteristics. Indeed, Ruggiero's formulations are reminiscent of Abraham Maslow's analysis of the characteristics of self-actualizers (Liebert 328-33). These include:

--efficient perception of reality;

--acceptance of self, others, and nature;

--continued freshness of appreciation;

--spontaneity, simplicity, and naturalness;

--being problem centered;

--discriminating between means and ends and right and wrong;

--detachment;

--independence from culture and environment;

--resistance to enculturation;

--a deep desire to help humankind;

--being deeply democratic

--having deep interpersonal relationships,

--having a philosophical sense of humor,

--being creative.

Common to Maslow's theory and Ruggiero's formulation of characteristics possessed by critical thinkers is a concern to increase self-awareness.

According to Ruggiero (47-55), critical thinkers:

1. are honest with themselves.
2. resist manipulation.
3. overcome confusion.
4. ask questions.
5. base their judgments on evidence.
6. balance their thinking.
7. look for connections between subjects.
8. are intellectually independent.

Furthermore, a variety of other behaviors or tendencies are most often avoided if one is a critical thinker. Included in Ruggiero's list of faulty ways of seeing reality are: (1) selective perception; (2) pretending to know; (3) resistance to change; and, (4) either/ or thinking. Errors of judgment are also avoided by critical thinkers. These errors include: (1) over-generalization or stereotyping; (2) hasty conclusions; (3) unwarranted assumptions and failure to make a distinction; and, (5) over-simplification. Finally, certain errors in reaction, which are generally defensive, are avoided. Critical thinkers resist: (1) explaining away; (2) shifting the burden of proof; and, (3) attacking the person (58-72).

Ruggiero thus offers a number of applied critical thinking opportunities in relation to situations with which students are familiar. For example, nearly all aspects of public media can be

examined in a critical light, including commercials, print advertising, television programming, music, magazines, and newspapers. In exercises designed to motivate students critically to examine the content and approach of such mediums, a critical questioning format can be used. For example, one of Ruggiero's exercises asks students to answer the following questions (101):

> Does the commercial motivate the viewers to think or merely appeal to their emotions?
>
> What hopes, fears, or desires is the commercial designed to exploit?
>
> What attitudes and values does the commercial promote?
>
> Does the commercial use propaganda techniques?
>
> Would you classify this commercial as fair or unfair persuasion?

These are of course leading questions, but they promote a critical frame of mind and focus thought on specific subjects for critical evaluation.

Outcomes

Graduates should be capable of:

1. Demonstrating that they possess a critical frame of mind, an active rather than a passive stance in relation to problems and issues of individual and social import.

2. Applying a variety of critical thinking processes so that specific problems and issues are dealt with following step by step formats for thought, based on a command of a set of critical concepts (such as logical concepts and principles, the rules of rational evidence and persuasion, the empirical method of the social sciences, and the scientific method of the natural sciences).

Example One: Developing Critical Thinking Competencies in ART 100, "Art Appreciation" (associated competencies: writing; applying intuitive and imaginative processes):

After examining a painting--for example, Turner's "Rockets and Blue Lights" (1840)--discuss how the artist is conveying a special mood or tone in this work. Define your terms: what do

you understand by "mood or tone"? Support your discussion with specific observations about the work.

Example Two: Developing Critical Thinking Competencies in HUM 100, "Introduction to Film" (associated competencies: research, writing):

After viewing a movie rated PG, write an essay evaluating how suitable this film would be for children under twelve. By research, determine what criteria are applied in rating a film as PG. Are these criteria reasonable? In your judgment, do they effectively apply to the film?

Example Three: Developing Critical Thinking Competencies in PSY 203, "Abnormal Psychology" (associated competency: writing):

In layperson's terms, how would you describe the possible 'cause' of the phenomenon described in the following case study (Woodson, 198-99):

> Getting through the night is becoming harder and harder. Last evening, I had the uneasy feeling that some men were trying to break into my room to shampoo me. But why? I kept imagining I saw shadowy forms, and at 3 a.m. the underwear I had draped over a chair resembled the Kaiser on roller skates. When I finally did fall asleep, I had that same hideous nightmare in which a woodchuck is trying to claim my prize at a raffle. Despair. [Woody Allen, Without Feathers]

Analyze the phenomenon. Should one be alarmed?

Example Four: Developing critical thinking competencies in PHI 100, "Philosophical Issues" or PSY 202, "Developmental Psychology" (associated competency: apply moral and ethical principles):

Using a case study related to cheating, describe how you would handle the situation in relation to moral reasoning and the moral dilemma presented by such an incident.

Directions: Provide students with a copy of the following case, which presents a moral dilemma:

The Story of Marsha

> Marsha is a nineteen-year-old college sophomore enrolled in an introductory course in human development. She has to pass this course to remain in school, but she is currently failing. Her grandmother is ill, and Marsha has had to help take care of her. Her human development instructor had told the class that she would never give a

pop-test. However, the teacher has become angry at several students who have been talking during the class period and has decided to give a pop-test, which would count as a regular test grade. Marsha has not had time to study, and if she fails this test she will probably fail the course and be suspended from school. You are Marsha's good friend and realize how stressed she has been lately. You are prepared for the pop-test; Marsha, in desperation, wants to copy your paper.

Question: Would you allow Marsha to copy your paper? Why or why not? Analyze the situation and explain what principles lead you to your particular conclusion.

Example Five: Developing Critical Thinking Competencies in PHI 100, "Philosophical Issues" (associated competency: applying moral and ethical principles):

At the beginning of the semester, students are asked to answer a series of sixteen questions that pre-test student responses to fundamental philosophical issues (Solomon 30-32). For example,

--Is there anything you would willingly die for? What?

--If you had only a few minutes to live, what would you do with them? What if you had only a few days? Twenty years?

--Which is most "real," the chair you are sitting on, the molecules that make up the chair, or the sensations and images you have of the chair as you are sitting on it?

--Explain who (what) you are to a visitor from another planet.

--Is freedom always a good thing?

--Do you want to have children? Why?

At the end of the semester, students are asked to critique their own initial responses in terms of <u>answer and process</u>. On which questions, if any, have they changed their position? What arguments in support of particular questions would they now evaluate as fallacious or weakly supported? Alternatively, or additionally, students might be asked to answer the questions as a post test. Answers could be rated for strength on a 1 to 10 scale and compared with pre-test responses.

Example Six: Developing Critical Thinking competencies using video materials in ANT 100, "Cultural Anthropology" (associated competencies: writing, multicultural awareness):

Use of Videos to Promote Critical Thinking

Videos are commonly employed in NCCC classes. We believe that in many instances the viewing of the film emphasizes a passive rather than an active approach to learning. A cursory statement or two prior to the film, with a follow-up question or two afterwards, frame an essentially passive experience that is sometimes perceived (by the more sophisticated students) as little more than a device to fill class time without unduly exercising either the students or the teacher. A more productive approach--focusing on active, critical processing of the video material--is described below:

a) Videos must be selected that really add to the substance of the course; videos should be used only when they present material that cannot be offered in another manner.

b) Discussion questions must be distributed prior to the showing of the video.

c) Students should write a two-page review of the film based on the questions. (Students will be more attentive to the video and even take notes during its viewing if they know they will have to be responsible for an analysis of issues raised by the film.)

d) When possible, students should be supplied with additional readings that can be used to answer the questions while also providing further information. Rather than implying that videos and texts are radically different in function (as we may anticipate that the former--to a generation raised on television--will suggest undemanding entertainment while the latter suggest dutiful 'work'), the approach suggested here emphasizes a common emphasis of videos and texts on knowledge. In many instances, a combination of images and written words can provide a greater depth and fullness of knowledge than either medium alone can provide. This is probably the point of view of most educated people: pedagogical practices should advance this view.

In summary, after the instructor chooses a video that actually amplifies the topic being taught in a way not possible using other means of instruction, he or she should make the processing of that film (like the viewing of paintings in a museum) an **active, critical** process. Critical and reflective thinking can

be encouraged and promoted by making students more responsible for seriously considering the content of videos.

This process is exemplified in the following lesson plan for ANT 100, "Cultural Anthropology":

Objective: Studying cultural change by examining what has happened to hunting and gathering groups.

Video: The Bushman of the Kalahari

Critical Thinking Questions:

a) Discuss the impact of a changing world on the lives of the !Kung people. (Give examples.)

b) What are the implications for the !Kung people related to changes in their kinship networking and its role in their society?

c) Looking fifteen years into the future, what will we find when returning to study the !Kung people again?

Post-Film Assignment:

A two-page analysis of the film based on the above questions.

Additional Reading:

J. Yeller, "The Transformation of the Kalahari !Kung." Scientific American, April, 1990.

3. QUANTITATIVE REASONING

Although our task in general education is not to require all students to become statisticians, it is reasonable to expect that students understand and be able to interpret certain basic statistical concepts. It is difficult to go through the social science literature without some foundation in behavioral statistics. As teachers, we want our students to read more, but perhaps asking them to attack the professional journals without the slightest introduction to quantitative analysis is unfair and doomed to failure from the beginning. Even the assigning of a 'term paper' will lead to, at best, a mediocre product, and one most likely not quantitative if we haven't explained to students what those 'silly' symbols and numbers mean. We may have forgotten our own learning processes--in many cases painful processes. Learning the meaning and usage of various measures of

central tendency and other inferential statistics has never been easy. Yet, we ask a student to review a journal article related to something studied in class, forgetting that if we haven't explicitly taught quantitative concepts, that section of the article review will most likely be glossed over due to lack of understanding.

An understanding of the basic ideas in statistics assists us in thinking clearly about a problem, provides some guidance about the conditions that must be satisfied if sound inferences are to be made, and enables us to detect many inferences that have no good logical foundation (Snedecor 3). Continuously we are exposed to statements that draw general conclusions. In newspapers, books, television and radio programs, and so on, statements referring to a quantitative element are presented. With a knowledge of measurement, we can better form our own judgment about the truth of the statement.

In addressing quantitative reasoning, we focus on two important issues. The first is that of making our students knowledgeable about the language of statistics and research. As we review any number of introductory psychology textbooks, the first chapter invariably is devoted to presenting the student with the language of research and quantitative measurement. In the space of one short chapter, the student is bombarded with concepts and terms rarely encountered before. Suddenly, we are speaking a new language: variables, hypotheses, relationships, correlations, variations, samples, scales, and data. The following exercise might be valuable in helping students better to understand this new domain:

> **Exercise: "Using Statistics and Research"**: Using at least seven or eight terms related to research or the experimental method, write a short paper of one page or less to describe correctly what statistics and research are used for.
>
> > **Sample Response:** Statistics and research are used to assist us in making decisions about problems which may confront us in our lives. In seeking answers to problems, we can be more objective if we first develop <u>hypotheses</u> (questions to be answered) and then proceed to analyze <u>data</u> which relate to these hypotheses. Sometimes, if we are interested in looking at relationships between <u>variables</u>, we use what we call <u>correlation</u> analyses. On the other hand, if we wish to make comparisons between two groups to determine if they are different from one another, we do what is termed a <u>contrast</u> type of analysis. In either type of analysis, we may <u>randomly</u> select <u>samples</u> to represent <u>populations</u> which we are studying (Courtney and Sedgwick, 1973).

A step beyond mastering the basic vocabulary of research is that of understanding what kind of approach should be used to evaluate a specific problem. We hear through the media about a variety of conclusions concerning human behavior. Semantically, "data" has become a word that is used in a variety of contexts to signal hard-headed, pragmatic attention to "the facts." The use of the word may or may not be justified; the "data" may or may not prove anything. The critical thinker will have to evaluate the correctness of the method used in the data collection process. One particular method will not be appropriate for all investigations. The social science student learns that conditions affect one's choice of a particular method of inquiry. Specifically, the student needs to understand when each of the following approaches is the most appropriate methodology: historical, descriptive, and experimental.

With appropriate training, students can quickly become confident in identifying research types:

> **Historical Research:** A sociological study analyzed life history data and studied the degree to which black and nonblack males convert educational attainment into income and prestige, as well as the effects of parental resources in determining educational levels. Income and job placement records were used for gathering data for the research.
>
> **Descriptive Research:** The School of Education at the University of Wisconsin has replaced its three semester-long foundations courses with a variety of one-credit, 5-week modules. Six to nine modules are required with a minimum of one in each foundation area. Administrative concerns such as overfractionalization were discussed and presented in a written report which characterized the program.
>
> **Experimental Research:** An educational psychology study was conducted to determine if elementary students learn reading more efficiently using multi-media instructional materials. Achievement test scores were compared for classes of students who used the new as well as the traditional materials (Courtney & Sedgwick, 1974).

The second issue concerning competence in quantitative reasoning involves the development of an understanding of the basic statistics. As illustrated earlier in this report (Section IV), a variety of exercises can be undertaken to increase the student's ability to analyze data. Included here would be the calculation of measures of central tendency, variability, and correlation, and the depiction of data through histograms, polygons, and scattergrams. Knowledge of the simple descriptive statistics will be of the greatest use to our students. In

everyday life, numerous examples can be encountered that require this basic understanding. In an educational setting, the following example illustrates the need to understand the concept of correlation (Courtney & Sedgwick, 1973):

> **Example:** A comparison was made of the pre and post test achievement scores for an experimental group in an home economics clothing class. The following results were obtained:

Student Number	Scores Pre-Test	Post-Test
1	109	123
2	106	120
3	101	122
4	102	105
5	93	116
6	98	112
7	100	115
8	95	127
9	96	114
10	103	118
11	82	101
12	87	96

"r" = +0.52

_____ direction of relationship (positive)

_____ strength of relationship (moderate)

_____ percentage of commonality (26%)

This example is only meant to show how we run across data that may or may not be understandable. On an even less sophisticated level, we regularly hear statements such as: the users of Toothpaste "A" have 23% fewer cavities; a television program had 18.6 million viewers; the cost of living rose 0.3% in the last month; and the smoking of cigarettes is injurious to one's health. With a background in quantitative analysis, we become better prepared to make judgments concerning the validity of these statements.

Finally, we would refer to the role of quantification in the Western tradition, a term that is used here not to call to mind Great Books or high culture, but rather to remind us that power

in the modern world flows in part from a triumph of reason, of which technological developments are among the fruits. The application of reason in the modern world involves quantification, and a certain view of the nature of reality. Students in introductory physics courses are quickly exposed to this view, but its reach extends beyond science, beyond any one discipline. Historically, this development is often traced back to Descartes (see, for example, Davis & Hersh). Culturally, the language and the assumptions of quantitative reasoning are everywhere present, even if not universally understood. Computer technology is a development for which Western culture was peculiarly prepared, enabling us to manipulate measures of reality as we believe reality <u>should</u> be perceived and measured. Quantitative reasoning is thus a competency that informs the world view of every educated person, as well as a competency with specific critical and practical applications.

<u>Outcomes</u>

Graduates will be capable of:

1. Demonstrating a knowledge of the basic relationships between quantitative reasoning and research.

2. Demonstrating a comprehension of the basic vocabulary of research in relation to quantitative reasoning.

3. Demonstrating a knowledge of the basic statistics.

4. Demonstrating an understanding of the role of quantification as a measure of reality.

Example: See "Developing Quantitative Reasoning Competencies in PSY 101, "Introductory Psychology" (Section IV, above).

4. INDEPENDENT ACQUISITION OF KNOWLEDGE; RESEARCH

The ability to research is best defined broadly, rather than narrowly. As we believe that general education assessment necessarily involves a focus on the future, an attempt to measure our institution's ability to produce productive and responsible citizens who can succeed in the world they will enter after they leave academia, we do not define research only as a mode of academic inquiry and reportage. The vast majority of our graduates will never engage in research at the professional level. On the other hand, <u>all</u> will have to acquire knowledge independently.

Research is the process by which we enter the universe of existing knowledge and accurately derive information that we need to have or desire to have for a specific--usually pragmatic--purpose. (If curiosity is a characteristic of our species, all normal human beings at least occasionally wish to obtain information simply for the sake of having it, but only scholars are paid to seek knowledge for knowledge's sake.)

The ability to research is empowering, to the degree that 'knowledge is power,' and to the degree that we live in an age distinguished by an 'information explosion.' Power in many modern organizations is only partly conferred by formal status, by an individual's job title and place in the organizational chart. The power of individuals comparably empowered by organizational status varies significantly as a function of their ability to obtain, understand, and report information, so that they can apply information obtained through research to specific ends.

One may acquire a competency to research if one commands a set of skills. These should not be defined in narrowly academic terms. Alden Todd associates these skills with four widely disparate roles: those of the reference librarian, university scholar, investigative reporter, and detective (8). A narrow definition of research focuses on the first two roles; a broad definition includes all four. As Todd goes on to point out, reading (or examining audiovisual materials) is but one of the ways to research. Other methods are:

> **Interviewing**, or asking other people, both orally and in correspondence.
>
> **Observing** for yourself.
>
> **Reasoning** what must be the fact from what you have learned by other means (11).

Therefore, a competency to research does not simply rest on an ability to use a library and to report the results of library research in proper form, as demonstrated by the production of properly documented research or term papers. Yet these skills are of course extremely important. As teachers at a transfer institution, we must see that these skills are taught, because they are prerequisite to effective learning and success at the baccalaureate and graduate levels. But we emphasize that they do not in themselves define the research competency.

Given the nature of our institution, a thorough definition of the research competency is particularly important. Like most community colleges, we employ relatively few people who have professional qualifications and skills to perform academic

research. There is, inevitably, an occasional lack of sophistication about the nature and methodologies of academic research. Perhaps because academic research is peripheral to the professional lives of most faculty, we have occasionally given the impression that the production of term papers is an end rather than a means, a reductive rather than an enlarging experience. Not surprisingly, library usage rates are low. Many students, even after several semesters at the college, genuinely fail to understand basic concepts such as plagiarism and are completely at sea when faculty do ask them to use the library and to report on the results of their investigations. Many members of the college community lament this situation, but at present there is no coherent strategy for effecting reform. It may be that assessment of general education competencies will provide an occasion for developing such a strategy.

If our graduates are to have a broad and effective competency individually to acquire information--and if we are to assess their command of that competency and hope to demonstrate that they have acquired such a competency--it would be realistic to recognize that the assessment process must be linked to an intensive, thorough effort to define and explain the particular skills and techniques that our graduates should command. Only then will our students have the basic academic research skills necessary for success at four-year colleges and universities, and --more broadly--be able to acquire the information necessary for success and satisfaction in the personal, civic, and occupational realms after their formal education has ended.

Based on this analysis, we have recommended that a course be developed to teach library skills (see Section VII, below).

In addition, we recommend that any review of the preliminary list of outcomes described below be linked to a survey of instructional development needs. All teachers of general education courses should be comfortable in their command of the assumptions and techniques that characterize academic research, as these apply to lower-division general education courses.

Outcomes

Graduates should be capable of:

1. Demonstrating a respect for intellectual property.

   Students learn that intellectual property (printed material, computer programs, etc.) involves real property rights, protected by copyright law. A basic understanding of copyright law is acquired, such that it can be applied to real situations in academia and

in the business world. The distinction between owning a book and owning the right to make certain uses of the book is explained.

Plagiarism often occurs because students do not see words and specific ideas as being 'owned.' No graduate should be ignorant of the ethical and legal dimensions of this ownership. The creation of knowledge should not be an empty abstraction to an educated person: one of the many reasons for asking students themselves to develop research skills is that they thereby may acquire an experiential understanding that books and articles are written by real people, not by abstract 'authors.'

2. Limiting research topics.

   Plagiarism is sometimes invited by research assignments that are too broad and that have not been limited. Plagiarism, or more probably a caricature of research, will be invited when students are allowed to 'research' war, peace, abortion, the Second World War, or other topics that have not been limited. Definition and limitation of subject is an essential research skill that should be developed within all academic research assignments.

3. Efficiently and effectively using a library to perform specific research tasks and to gather information to a specific end.

4. Collecting, organizing, and evaluating information gained by reserach.

5. Distinguishing between primary and secondary sources.

6. Reporting the results of research in properly documented and competently written form, as may be acceptable to educated readers teaching at two-year and four-year colleges and universities.

   The formal requirements for documentation vary according to the documentation style that is required. Students need to be aware that there are a number of widely-used documentation styles in various liberal arts & science disciplines (APA, MLA, Chicago, etc.). For general use, the MLA style is recommended, as the need to teach two formal structures (one for footnotes and the other for bibliographies) is avoided. The APA style also meets this standard of practical applicability.

   In developing a command of documentation styles, students should acquire an awareness of why they exist: to present

bibliographical information in a complete and predictable manner so that the reader can efficiently locate sources that have been cited. Experience of research will give texture to this explanation. Once a student has tried to locate a given volume of a journal in a library that may have a run of fifty or a hundred bound volumes, the student will understand why just the year of issue is not enough when identifying sources from journals. One will pick up the correct volume much more quickly and efficiently if one is looking for a volume number. Lacking a functional understanding of the role of documentation styles, students will not learn them efficiently or well.

7. Using a broad array of research techniques, including interviewing and direct observation. Research should be understood as something more than an activity that one only does in college.

Example One: Developing Research Competencies in ART 100, "Art Appreciation" or COM 121, "Speech Fundamentals" (associated competency: speaking):

Choose a painting that is of particular interest to you. With the intent of preparing a five-minute talk concerning this work of art, go to the library and find additional information on the painting and the artist. Identify the information that would most likely interest your audience. (If you were a tour guide in a museum, what would people viewing the painting be most interested in knowing?)

Example Two: Developing Research Competencies in PSY 101, "Introductory Psychology" (associated competencies: critical thinking, writing):

Given a particular research question, how would you go about verifying your idea from a scientific point of view? For example, how would you deal with the following research question:

> Will progressive relaxation exercises lower the test anxiety I experience in class?

Example Three: Developing Research Competencies in SOC 110, "Social Problems":

Given a very specific problem that interests you, collect all the material you can on "sources of information" for this kind of problem.

Example Four: Developing Research Competencies in SOC 100, "Introductory Sociology" (associated competencies: critical thinking, writing):

The following assignment, employing the case study approach. is offered by McCleary (207-208):

The Situation:

Most examples of deviance in a society are minor or are so sketchily reported that the average citizen cannot make a safe judgment about why the deviance occurred. However, occasionally an example assumes major importance, and the media not only cover the deviant act but also delve more deeply into a person's background, thus providing us with information for making some reasonable inferences about the sociological explanation of the person's actions.

The Assignment:

Choose a well-known example of deviance, either of a single person or a group of persons, research the background of the person or group, and then write a paper explaining why, according to the sociology of deviance, the deviance occurred. Also discuss alternate explanations and why you do not accept them.

Additional Requirements:

1. This must be a current example, in the news at the present time. John Wilkes Booth will not do.

2. Avoid any subject that has been discussed in book-length form.

3. In gathering information about a person's background, rely on the best sources you can find. The National Inquirer is not appropriate, for example.

4. Use some reasonable method of letting the reader know your sources of information. If you are experienced in scholarly documentation (footnotes and bibliography), use that method, but if you are not, use a less-formal method. Concentrate on the main assignment, and avoid getting too "caught up" in the intricacies of documentation.

5. The following are some current [as of 1985] examples of deviance. You may use one of them or find your own topic.

a. The black Miss New York who became Miss America

b. Billy Cannon, former winner of the Heisman Trophy (for college football)

c. Black Liberation Army (Kathy Boudine **et. al.**)

d. John Z. DeLorean, automobile magnate

e. Jeanne Kirkpatrick, Ambassador to the U.N.

f. Don King, sports promoter

g. Nuclear protesters at the Seneca Army Depot

5. INTUITIVE AND IMAGINATIVE PROCESSES

Our view of general education recognizes that an educated person has the ability to solve problems through reason, or through intuitive and imaginative processes, or through a combination of reason and intuition. Thus, in the 'real world' and in the classroom, one frequently reacts to situations by employing speculation, intuition, and imagination.

We shall examine the intuitive and imaginative processes from several perspectives.

Intuition and Imagination: A Psychological Perspective

For a very long time, psychologists have been interested in the cognitive processes people employ to solve problems. Currently, three models are proposed to explain one's cognitive-strategy system. Since these are not well understood, the models attempt to describe how one takes previously learned material and applies it to problem solving.

Model 1: Algorithms: a systematic search of every possible approach to the solution. Due simply to the very large number of possible solution to any problem (including obviously stupid solutions), people obviously don't think so systematically.

Model 2: Heuristics: methods for discovering the correct solution to a problem by exploring the possibilities that seem to offer the most reasonable approach to the goal, rather than all possibilities. People generally approach solving problems with certain "rules of thumb" to guide their decision making.

Model 3: Means-End Analysis: a problem solving process in which the difference between the current situation and the desired situation is defined, and then a series of steps are taken to reduce and finally eliminate the difference. We begin with a clearly specifiable problem and end up with a specifiable solution (which might be quite inventive).

Looking at these models, we can see that Means-End Analysis may offer the promise of being applicable to a number of learning situations. People who are good at or who become good at this kind of general problem solving may invent a variety of fascinating products or solutions. The questions to ask when engaging in Means-End Analysis is, "What is the difference between what I have now and what I want?" At this point, one breaks the problem down into as many subgoals as required and sees where it leads.

The following example is offered by Dworetzky (265):

> **Problem:** People often are injured in the shower and bathtub. Your goal is to reduce or eliminate such injuries.
>
> **Question:** Why are people hurt in the shower or bathtub? They often fall. (At this point, the solution may appear to be to suspect gravity or to stop people from falling--except that, in posing the problem, you've made a classic error. You must always be careful in defining the problem. People are not hurt in the shower or bathtub because they fall. No one is hurt by falling. It's landing that causes the trouble. Just remember the man who fell out of a 10-story building and was heard to say as he passed each floor, "So far, so good." So let's start over.) People are hurt in the bathtub because they land on something hard when they fall. What is the difference between what you have (initial state) and what you want (end state)? Hardness. What determines hardness? The manufacturing materials. What you need, then, is soft material for the bathtub and shower stall. But soft material is porous. What is the difference between what you have and what you want? Porosity. . . . Therefore, you need a soft nonporous material. Is there such a material? What is the difference between what you have and what you want? Information. Where can information be found? In a library. If you find that there is such a material, you are set. If not, then what is the difference between what is available and what you need, and can you develop a soft nonporous material? As it turns out, there are many soft, fairly rigid, nonporous materials. And there's the answer to your problem, a soft bathtub or

> soft shower stall. In fact, such tubs and showers have recently been developed. They keep their form, they hold water well, and they are very comfortable. As a bonus, soft materials produce a lot of friction, and they are very difficult to slip on. If a person should fall, however, the original problem of a body landing on a hard surface is eliminated.

Intuition and Imagination: Artists and Scientists

One of the most interesting connections among the humanities, the social sciences, and the natural sciences involves creativity. How are insights gained in any realm of structured exploration and thought? What do the artist and the scientist have in common? Is the discovery of analogies a key, as Bronowski suggests?

> The discoveries of science, the works of art are explorations--more, are explosions, of a hidden likeness. The discoverer or the artist presents in them two aspects of nature and fuses them into one. This is the act of creation, in which an original thought is born, and it is the same act in original science and original art (19).

Is aesthetic symmetry a key to scientific discovery, as Lipscomb suggests?

> Of the many choices of aesthetic criteria available in the arts, symmetry is only one. However, it is a very natural choice for an aesthetic aspect of science (10).

Is an aesthetic appreciation of beauty or 'prettiness' a key, as the language of Watson's account suggests?

> Until [a complementary helix could be established as stereochemically possible), the objection could be raised that, although our idea was aesthetically elegant, the shape of the sugar-phosphate backbone might not permit its existence. Happily, now we knew that this was not true, and so we had lunch, telling each other that a a structure this pretty just had to exist (120).

In many discussions of general education, the value of developing a sense of connectivity is emphasized. The issue of creativity is a thread running through all the liberal arts and sciences. A coherent strategy for advancing general education objectives will increase the probability that students will identify this connection, among others. The whole of their general education

will then begin to make more sense, and the fragmenting impetus of a distributional approach to electives will be to some degree arrested.

Intuition and Imagination in the Arts

In some instances, intuitive and imaginative reactions can be described as creative. That is, they may produce a novel insight, a new way of seeing a problem. Or, they may produce an experience that can be enjoyed for its own sake, as an alternative to involvement in everyday concerns. Temporarily supplanting more practical social requirements, intuitive and imaginative responses satisfy personal needs, aspirations, and urges. When sensitive and informed, these reactions aid in formulating basic information, organization, guidance, and interpretation.

Study of the fine arts suggests a connection between creativity and direct experience of existing expressions of creativity. Having experienced and comprehended the form and expressions of varied established works, the individual--relying upon his or her experiences and empathetic responses--strives to solve a problem or understand a situation by interpreting and manipulating concepts, materials, and physical elements in accordance with the dictates of form.

This process entails:

1) Experiencing and comprehending the nature and development of historical, individual, and integrated styles.

2) Understanding form (organizational composition and design) and the individual ability to recognize, describe, and analyze a variety of forms, traditional and contemporary.

3) Developing an aesthetic awareness and sensory perception to facilitate the creative process.

4) Developing an individual ability to comprehend and apply established rules and values under varied circumstances.

5) Acquiring skill in recognizing, selecting, and manipulating materials toward a desired and satisfactory end.

6) Developing tne desire and confidence to seek and select ideas, formulate alternatives, and develop the final product.

7) Acquiring the willingness to deviate from the norm.

Problem Solving

Intuitive and imaginative reactions can be used to solve problems. Examples of this application include brainstorming and free writing.

As students learn and apply these techniques, they are encouraged to form relationships they haven't seen or thought of before, to allow for the emergence of new patterns, or to produce new combinations and connections of familiar elements.

In brainstorming, solutions to specific problems are generated and arrived at most effectively in a group, as follows:

a. A specific question, topic, or problem is presented.

b. After a time limit has been set for the brainstorming session, the number of desired solutions is established.

c. Unrestricted ideas or suggestions are quickly written down.

d. Upon completion of the period, the ideas are reviewed and edited.

Free writing is directed more to the individual. It is a method of rapidly and freely putting thoughts onto paper for a given period of time. Impulses and impressions--whatever comes to mind--are recorded without concern for organization, spelling and grammar, or style. The free writing experience is followed up with reviewing, expanding, editing, and polishing.

Brainstorming and free writing are effective introductory methods for selecting a topic, researching a topic, rough drafting, initiating a discussion, addressing issues, and so forth.

Outcomes

Graduates will be capable of:

1. Applying techniques that use intuitive and imaginative reactions to experience in order to solve problems.

2. Valuing intuitive and creative reactions to experience so as to have an effective appreciation of importance of these reactions in human experience.

Example One: Applying Intuitive and Imaginative Processes in Studio Art Courses (technique: brainstorming):

Preliminary to an introductory lecture or discussion of a topic (e.g., compositional design, photographic materials, the photographic process, a specific drawing or painting technique, Abstract Expressionistic painting, etc.), students are asked to formulate their own observations within a three to five minute time frame. Derived from past experiences, new discoveries, and feelings, these observations are generated as rapidly as possible and are non-evaluative. Anything goes. Operating within an environment of trust, students may be expected to be free and open in presenting ideas. Because assignment evaluation can be based upon participation and interaction, all students must contribute, even if their observations are only questions.

After the allotted period of time ends, a non-judgmental list is shared with the group. They then have approximately ten to fifteen minutes to discuss and evaluate each point and to

determine and select a given number of the most appropriate ideas for classification, discussion, application, and follow up.

Example Two: Applying Intuitive and Imaginative Processes in HUM 100, "Art and Music of the Western World" (technique: free writing):

In this exercise, students are asked to listen to a piece of music or to observe a painting. The work in question has never been discussed. While listening or observing, they are asked to freely, unrestrictively, and quickly write down their observations and experiences. This is followed up by sharing these impressions with the class. After being exposed to a variety of ideas, the students are then given an assignment further to research and report on the work.

Example Three: Applying Intuitive and Imaginative Processes in ART 201, "Watercolor I" (technique: problem solving):

Having discussed compositional structure and design, as well as artistic expression, the students are asked to analyze a traditional painting in the Renaissance or Baroque style and a Modern work by Mondrian or Braque. Having recognized the major characteristics of both apparently divergent styles, the students are then given an assignment asking them to paint the traditional work in the selected modern style, while retaining the traditional color scheme. (A similar assignment of character reversal could be designed for composition, history, or literature classes.)

Example Four: Applying Intuitive and Imaginative Processes in the Abstract or Non-Objective Process (e.g., in ART 111, "Design I" or ART 101, "Drawing I"):

Starting with a representational rendering of a simple object rendered in line, tone, and space, students modify this statement to conform to a semi-abstract, cubistic, geometric abstraction, and a biomorphic, free form statement. Each statement is a complete compositional design.

Example Five: Applying Intuitive and Imaginative Processes in ART 151, "Photography II" (technique: problem solving):

Having observed and discussed Rembrandt's portraits and his unique lighting effects, students are assigned to simulate Rembrandt's lighting in photographic portraiture using studio lighting.

6. ETHICAL AND MORAL PRINCIPLES; VALUE JUDGMENTS

One of the goals of education is empowerment. Having gained power in any form, in any of the realms of life, an educated individual must be able to apply ethical and moral principles and to make appropriate value judgments, as the possession of power carries with it the ability to harm and to hurt. As Wayne Booth remarks, "If we train our students in the arts of reading, writing, listening, and speaking, we shall inevitably empower them to do great harm in the world--to use rhetoric for private, antisocial ends, to break rather than build connections" (29).

The necessary linkage of empowerment with values is an important theme in the Western Tradition; a concern to preserve this principle is surely a major motivation in many recent critiques of American education. Bloom, for example, argues that "the West is defined by <u>its need for justification of its ways or values</u>, by its need for discovery of nature, by its need for philosophy and science. This is its cultural imperative. Deprived of that, it will collapse" [italics added] (39).

<u>The Example of Science and Technology</u>

A major locus of the debate between values and power is to be found in possibilities created by modern science and technology. On the one hand, C.P. Snow, in his influential polemic on the supposed divide between humanists and scientists, argued that "there is a moral component right in the grain of science itself" (13). Central to Snow's argument is the moral principle that misery and pain are bad--and the compelling evidence that science and technology have done much to alleviate misery and pain.

On the other hand, of course, we have nuclear weapons, pollution, and other phenomena suggesting that science is at best a neutral force, morally capable of good or evil, and ethically capable of producing an infinite variety of dilemmas challenging our beliefs and values. To illustrate, the following examples will suffice (Warren, 27):

> A 16-year-old high school sophomore lies in a hospital, in a deep coma, the victim of an auto crash. Breathing and circulation are being maintained artificially. A monitor reveals only the hint of vital brain waves. Should these extraordinary and costly means for sustaining life be removed? Should the medical team give up? Who decides?
>
> Molecular geneticists have developed the technology to recombine genetic information from very different species--the potential gains are great--so, perhaps are the risks. Should they proceed? Who decides?
>
> A single, young woman with a strong desire to become a mother elects to undergo artificial insemination by a donor in a reputable, safe and licensed medical clinic. Is this morally permissible? What effects could this have on family, and thus societal, structure? Who decides?
>
> A group of prison inmates, all presumably incarcerated for life, have been asked to be experimental subjects for studies designed to test potentially valuable psychosurgical techniques or mood-altering drugs. Should they have been asked? Should the experiments proceed? Who decides?

These contemporary ethical dilemmas will have a familiar ring to any educated person. In response to these dilemmas, many medical schools have introduced courses in values, while professional schools of business, law, and engineering have also developed similar courses to prepare graduates to deal with the ethical dilemmas specific to these professions (Boyer and Levine 44).

Values in General Education

An eloquent statement of the principles determining the role of ethical and moral judgment in general education is provided by Boyer and Levine (44-45). It is worth quoting at length:

> We suggest that . . . all students examine the distinctions we make between beliefs and "facts," and how values are formed, transmitted, and revised. They should examine, too, the values currently held in our society, looking at the ways such values are socially enforced, and how societies react to unpopular beliefs. General education should introduce all students to the powerful role political

> ideologies, and particularly religion have played in shaping, throughout history, the convictions of individuals and societies.
>
> Students should be reminded, too, that the university itself--through its curriculum, student selection, grading system, research design, arrangements for promotion and tenure, and all the rest--reflects the choices of its members. None of these choices is "natural." All are human-made, born of values, rooted in tradition.
>
> Finally, each student should be able to identify the premises inherent in his or her own beliefs, learn how to make responsible decisions, and engage in a frank and searching discussion of some of the ethical and moral choices that confront us all. . . . How, for example, can messages be honestly and effectively conveyed? How can institutions serve the needs of both the individual and the group? On what basis is a vocation selected or rejected? Where can the line be drawn between conservation and exploitation of natural resources? These are only a few of the consequential ethical and moral issues that a common learning curriculum must confront.

Liberal arts & science courses offer many opportunities for pursuing the goals described by Boyer and Levine. Indeed, in many instances, consideration of the principles by which we live is inseparable from the content of these courses. The least opaque way to define content is often textual: what do we ask students to read? If, in a history course, we ask students to read of the events of this terrible century, we cannot avoid the issue of values, of justifications that may moral or immoral. If, in a literature course, we ask students to read Conrad's Heart of Darkness, Tolstoy's "The Death of Ivan Ilych," or any of thousands of other texts, we have entered the realm of values. One extended example will suffice:

In Melville's Billy Budd, Billy states that he struck Claggart without malice and without the intention of killing him. Vere affirms that he believes Billy, but he emphasizes at the court martial that judgment must be rendered on the basis of the action, without regard to intention. In relation to the action, no mitigating circumstances can apply. In Vere's speech to the court, he opposes "moral scruple" against "miliary duty," "private conscience" against the legal stipulations of the Mutiny Act. He makes clear that in this circumstance these oppositions must be resolved by accepting that duty and the law have a greater claim than moral principles and the dictates of the conscience.

No educated reader of Billy Budd can avoid considering--and perhaps ultimately accepting or rejecting--the assumptions upon which Vere's argument depends. What are those assumptions? Has he rationalized, convinced himself that he has no choice but to do what he knows is morally wrong? Or does he in fact have no choice but to act as he does? Involvement in these questions within the context of the novel leads us, paradoxically, out of that context and into the world we ourselves inhabit. To live well in that world, we need to consider questions such as the following:

> Are moral principles absolute or relative?
>
> Should one always act in accordance with what one's conscience tells one to do?
>
> Can governments **require** individuals to act--by virtue of their public office--against their private consciences? (Vere is a captain in the Royal Navy; his country is at war.)
>
> Do moral principles apply only in some situations?
>
> Does the end always justify the means? Sometimes? Never? (In Vere's mind, the end is maintenance of order so that the military effectiveness of the Bellipotent is unimpaired; the means is hanging Billy Budd.)
>
> What do we mean by "conscience"?
>
> How should the conflict of individual rights and interests with social interests be resolved? [Billy's interest is not to be hung; Vere sees himself as defending the national interest by maintaining discipline. Are these interests of equal validity? Is one more important than the other?]
>
> In a book on battle of Verdun, which produced at least 700,000 casualties, Alistair Horne observes, "In all man's affairs no situation is more lethal than when an issue assumes the status of a symbol. Here all reason, all sense of value, abdicate" (238). Is Billy a symbol? Have his actions assumed symbolic status? Are symbols mere literary devices, empty words? If so, why are humans motivated to die for them? A national flag is a symbol.

One of the most dangerous assumptions of people who misunderstand general education's purpose has something like this form: liberal arts & science courses have no practical application and no connection to the 'real world.' Acting on that belief can--literally--kill. Having no understanding of the symbolic nature of language, no sense of the principles that bind individuals to

society, and no sense of how values relate to actions all prepare one to be a victim of life in general and of modern technological societies in particular. That one may be trained to enter a lucrative career doesn't matter in the least when the economy falls apart or the bullets start flying. It is practically valuable to have some answers when one comes to the terrible point of asking, 'why is this happening to me?' It is even more practically valuable not to have to come to that point. This is a moral argument. We believe it is crucial that NCCC graduates appreciate the weight and life-and-death importance of this form of argument.

Outcomes

Graduates will be capable of:

1. Making moral and ethical judgments in relation to specific individual and social issues.

2. Comprehending and applying principles of moral and ethical thought, such as relating means and ends and distinguishing between beliefs and judgments based on reason and evidence.

Example: Developing a Competency to Make Value Judgments in HIS 151, "U.S. History I" (associated competencies: critical thinking, writing):

During the 19th Century, the obligation of able-bodied men to serve in the military, even during time of war, might be fulfilled by hiring a substitute: "the obligation of the individual was not necessarily to serve in person; it was to furnish military service. If he could provide an experienced man to do his duty for him, so much the better." This practice was wide-spread, and hotly debated. For example, a French commission examining the lessons of the Franco-Prussian war of 1870-71 referred to the practice as a "blood tax." On the other hand, conservatives argued--successfully in France--that the equality of universal military service was more apparent than real. As one politician remarked, "Burdens must be equal, but if you want to impose the same conditions and the same way of life on totally different individuals it is you who are offending against equality. . . . The society where everyone is a soldier is a barbarous society" (Howard 14).

During the Civil War, men who were drafted to serve in the Northern armies could hire a substitute or pay a commutation fee of $300, the equivalent of a year's wages for a laborer. In one study of men who were drafted in Ohio, the evidence suggests that

only 1.8% of clerks actually served (26.2% failed to report, 47.7% were exempted for cause, and 24.3% commuted their service by paying the fee or hiring a substitute). A similar policy allowing men to hire a substitute prevailed in the South, popularizing the slogan, "rich man's war and poor man's fight" (McPherson 601-604).

The draft was an important issue in elections held during the Civil War. Imagine, for the moment, that you are running for Congress in northern New York during the 1864 election. Based on your knowledge of the events of 1861-1864 and your own values, what position would you take on the morality of allowing men to hire a substitute? The voters want to know where you stand, and you have been asked to submit a 500-word article for publication in several newspapers explaining and defending your position. Do you support or oppose substitution? Why? What principles or values determine your position?

7. SENSITIVITY TO OTHER CULTURES

Multiculturalism is among the most contentious issues facing educators today. We are not suggesting that every member of the College community should agree with our conclusions. Rather, we believe that every educated person, including every NCCC graduate, should have seriously considered the issue, whatever position he or she ultimately takes with regard to it.

How is multiculturalism a particularly sensitive and problematic competency. The first problem involves terminology. What are "other cultures"? The term is not particularly satisfying, calling to mind the (to Western eyes) purportedly bizarre practices of Pacific islanders that still titillate students in many introductory anthropology courses. "Culture" is almost certainly the wrong term.

If we use "sensitivity to other cultures" as an expedient short hand, we actually mean to call to mind not only a recognition that there is an immense variety of coherent patterns of learned behavior, values, and social systems in human experience when looked at from a broad temporal and spacial perspectives (as demonstrated by historians and anthropologists), but also that within our own time and place there is a breadth of human possibility that is not completely subsumed within the normative values of Caucasian males. We believe that educated Americans in the late Twentieth Century must be sensitive to issues of color and gender and to traditions other than the Judeo-Christian tradition, at both the 'high' and 'low' cultural levels. We have subsumed all these issues within the 'multicultural' rubric.

Multiculturalism in America

Within American culture, issues of color and of gender are clearly of central concern. We believe students must be helped to understand these issues, so that they can responsibly perform their civic duties in the years to come. It is emphatically not our role to guide future citizens to particular political conclusions, but it is our role as educators to prepare students to deal with the fundamental social and political issues of our age. As we have consistently argued, general education is philosophically defensible as a means of preparing future citizens to deal with a future that is both predictable and unpredictable.

For example, one predictable quality of the American future is that our country will increasingly become a nation of racial and ethnic diversity. Scholars have long been aware of this fact; its implications are beginning seriously to register on the popular mind. For example, as this section of our report is being drafted, the cover story of Time is "America's Changing Colors." The provocative question on the cover of the issue is: "What will the U.S. be like when whites are no longer the majority?" As any educated person recognizes, the answer to the question is complex and unpredictable; but certain realities, as the author of the lead story suggests, are fairly clear: "By 2056, when someone born today will be 66 years old, the 'average' U.S. resident, as defined by Census statistics, will trace his or her ancestry to Africa, Asia, the Hispanic World, the Pacific Islands, Arabia--almost anywhere but white Europe" (Henry 28).

Global Perspectives

A global perspective is increasingly becoming an essential attribute of responsible citizenship. Cliches often reveal a slice of the truth even as they simplify. Geopolitically, the North-South axis is intruding on primacy of the East-West axis; in terms of mass communications and mass culture, we are on our way to becoming residents of a 'global village.' Although we are a small, rural academic community, a number of us have direct experience of the 'Third World'; an even larger number of us have some experience of nations and cultures other than our own. These are varieties of experience, actual and vicarious, that are increasingly defining the world our students will have to confront.

Scholars of American culture recognize many of the reasons why Americans are particularly inclined to resist the global realities of our cultural, political, and economic position now and in the years to come. America is unique among nations in being self-created, founded upon an abstraction. At the center of the abstraction is the myth of the new man (gender here being important), freed from the limitations of history and of the old

world of Europe, "a radically new personality, the hero of the new adventure: an individual emancipated from history, happily bereft of ancestry, untouched and undefiled by the usual inheritances of family and race; an individual standing alone, self-reliant and self-propelling, ready to confront whatever awaited him with the aid of his own unique and inherent resources" (Lewis 5). Among the many unresolved issues in American studies is the elucidation of the relationship between 'high culture'--the beliefs of intellectuals, the themes of American literature--and the powerful forces of popular culture. But the relationship is there, manifest in the assumptions and preconceptions of our students. It is at the center of what is best in America, what F. Scott Fitzgerald called a 'willingness of the heart,' but it is also productive of a peculiar limitation of vision, which any program of general education must confront.

We believe, therefore, that a sensitivity to other cultures must combine an understanding and valuation of 'the American way ' and of the history and traditions from whence it developed with a willingness to learn from other varieties of human experience. The American ideology places a supreme value on equity, fairness, and justice--on the right of the individual to be guaranteed "life, liberty, and the pursuit of happiness." In the years since 1776, Americans have agreed that this birthright extends to all, including women and persons of color and Americans of all ethnic backgrounds and religious persuasions. Thus, <u>diversity</u> is valued and appreciated in our own lives and organizations as productive of the fullness of opportunity and of participation that assures equity, fairness, and justice.

Based on these beliefs, we affirm that a sound program of general education should assist our students to take charge of their individual and organizational lives and to learn the skills of personal and organizational multicultural living.

<u>Multicultural vs. Monocultural Perspectives</u>

At this point we offer a specific exercise to illustrate the degree to which monocultural perspectives may limit an individual's ability to imagine alternative solutions to problems. The familiar "dot problem" below illustrates the process of moving from a monocultural to a multicultural perspective.

The objective is to draw a line through the nine dots illustrated below, using only four straight lines. If necessary, lines may

cross, but no line may be retraced. Once the pencil touches the paper, it may not be lifted from the paper:

o o o

o o o

o o o

Most people who attempt this puzzle try to remain within the boundaries of the dots. However, if one is successfully to complete the puzzle, one must draw **outside** the boundaries of the dots. Similarly, most of our life experiences have been monocultural, contained within certain well defined boundaries. As our world is undeniably changing, becoming 'smaller,' we believe that it is essential that our students explore possibilities beyond the boundaries of their own cultures.

At NCCC, this process of exploration is particularly important. For example, although 90% of the world population are people of color, very few NCCC students are people of color. Given this discrepancy, our students must gain the skills and sensitivity necessary to live in a world very different from the world they see embodied in the faces and assumptions of the members of the NCCC community.

Multiculturalism and the Western Tradition

In offering these criteria, we have avoided taking a position on the issue of cultural relativism, which is clearly a theme that should be explored in general education courses. We have also skirted an ideologically charged issue: the degree to which valuing of other cultural traditions might involve a decreased emphasis on the Western tradition. We are well aware that this is a central issue in debates about core curricula. We do not think that the problem resolves itself into a version of the 'either-or' fallacy, and we believe it is possible to mediate between the need to assure that students understand and value their own cultural tradition even as they learn to understand and value other cultural traditions.

For example, we would accept the emphasis on freedom of discovery running through the following passage from Bloom's The Closing of the American Mind while rejecting the implications of elitism equally evident in the passage:

> What image does a first-rank college or university present today to a teen-ager leaving home for the first time, off to the adventure of a liberal education? He has four years of freedom to discover himself--a space between

> the intellectual wasteland he has left behind and the inevitable dreary professional training that awaits him after the baccalaureate. In this short time he must learn that there is a great world beyond the little one he knows, experience the exhilaration of it and digest enough of it to sustain himself in the intellectual deserts he is destined to traverse. He must do this, that is, if he is to have any hope of a higher life. These are the charmed years, when he can, if he so chooses, become anything he wishes and when he has the opportunity to survey his alternatives, not merely those current in his time or provided by careers, but those available to him as a human being. The importance of these years for an American cannot be overestimated. They are civilization's only chance to get to him (336).

In response to this point of view, we suggest that general education is indeed an essential component of any college education. Community colleges offer students a college education at the lower-division level, and they also demonstrate in their philosophy, practices, and curricula a healthy respect for the value of training and education leading to a career.

We do not believe that the undoubted need to assure that our students have an effective understanding and respect for the Western tradition leads inevitably to a 'great books' curriculum or to a belief that our students are somehow qualitatively foreclosed from an engagement with civilization. Our constituency is a small, rural community college with a homogenous student population. We are guided by a need to maintain a sensitive balance between respect for the Western intellectual tradition that leads us to value equity, fairness, and justice--among other virtues--and a need to help our students understand the forces and possibilities of cultures in the world beyond the North Country, New York, America, or Western Europe. We don't believe there is any choice but to try to locate this point of balance. An educated person respects and values his or her own cultural inheritance while also respecting, valuing, and learning from the cultures of others.

Curricular and Extra-curricular Means of Developing Multicultural Awareness

A measurable increase in the multicultural awareness and sensitivity of NCCC graduates may be obtained to the degree that the problem is approached on a variety of fronts. Curricular developments are discussed below (Section VII.2), including revision of the content of existing courses, more intensive scheduling of existing courses that offer cross-cultural perspectives, and development of new courses. In addition, we recommend an increased commitment to offering new and creative

opportunities for NCCC students to develop a multicultural perspective. Possibilities include:

a) A Global Awareness Week on campus (open to the community): faculty would be encouraged to lecture on a topic in their discipline that offers a perspective appropriate to the occasion. For example, in ECO 102, "Introduction to Microeconomics," case studies of the impact of poverty in countries such as Bolivia, Columbia, or Peru might be examined.

b) A faculty exchange program with a foreign country: this program might be developed independently or in conjunction with existing exchange programs.

c) An evening lecture series: this would offer opportunities to explore cross-cultural issues, using speakers from the community as well as from the College.

d) A summer Canadian Studies Program: a summer school experience could be developed, perhaps in Quebec City, where students could obtain academic credit while at the same time learning more about another culture. Possibilities for cooperation with other institutions, such as SUNY Plattsburgh, may exist.

Outcomes

Graduates should be capable of:

1. Demonstrating that they understand and respect their own culture and its multicultural values, which include respect for the equal rights and opportunities of men and women and of people of different races, religions, and ethnic backgrounds from one's own.

2. Perceiving differences among cultures.

3. Demonstrating acceptance of the legitimacy of foreign cultural experiences.

4. Avoiding parochial thinking.

Example One: Developing Sensitivity to Other Cultures in Social Science Courses (associated competencies: critical thinking; research):

Nations throughout the Third World exhibit tensions that originate in the conflict between particularistic cultural

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identities and the imperatives of global economic, technological, and political realities. English language newspapers published throughout the world are a window through which students may look in order to investigate and analyze cultures and nations other than their own.

The following two examples may illuminate the richness of English language newspapers as a resource for obtaining course-specific objectives in social science courses while also developing multicultural awareness, critical thinking competencies, and research skills:

Tehran Journal, 17 May 1977:

[article]: "Iran Ready to Join the Search for New Energy Sources."

[photograph caption]: "Imperial Audience: His Imperial Majesty the Shahanshah receives Khodadad Farmafarmaian at a Niyavaran Palace audience yesterday when the latter presented a report entitled 'The World Energy Prospects for 1985-2000' to the Shahanshah. Premier Hoveyda was also present on this occasion."

[advertisement]: "The NIRT Music Department presents Sydney String Quartet. Program: Don Banks: Four Pieces for String Quartet. Debussy: Quartet in G. Minor, Op. 10; Bartok: Quartet No. 5."

[article]: "Fascinating Glimpses of the Monarch's Mind."

[photograph caption-: "Dino Brothers: His Imperial Majesty the Shahanshah yesterday received in audience two Italian brothers, who presented their second publication on Iran, 'Mission for my Country.' Some 2,000 copies of the book have been published with an outlay of $2 million. They are being sent to heads of state and distinguished personalities. The bulky volume, which has a gold plated cover, contains a number of original works of art by the well known Italian artist Bertotti, who spent more than a year preparing them. One of the paintings is a fold-in over a meter long. The Dino brothers earlier published a book on the Shah-People Revolution. They are now planning a volume on Reza Shah the Great."

[article]: "Rastakhiz [political party], a Forum for All Opinions."

[excerpt from book]: "The Mind of the Monarch."

The Fiji Times, 21 February 1987 and 28 February 1987

> [article]: "Vanuatu's PM Body Searched" ("Vanuatu Prime Minster Walter Lini received an apology from officials of Quantas after having to submit to a body search in Hawaii while on his way back from the United States. . . .")
>
> [article]: "Brothers Jailed for Life for Ba Murders."
>
> [article]: "Duo Jailed for 2 Years After Violent Robbery."
>
> [article]: "Teacher Needed: Students Threaten Hunger Strike."
>
> [classified advertisement]: "One bedroom flat with lounge, kitchen, bathroom, toilet and burglar bars at 22 Pikeu St."
>
> [advertisement}: "Fiji Gas Cooking Class: An Advanced Course for Housgirls."
>
> [classified advertisement: "Live-in Hindi-speaking housegirl required."
>
> [advertisement: "Sushree Gopeshwari. A 24yr old, recently back from India will present her **'Second Discourse'** about the re-juvenation of the most simplest, effective, scientific technique of attaining knowledge, love, peace, and everlasting happiness."

In the classroom, materials of this sort may be used in a variety of ways, depending on specific learning objectives. For example, discussion groups could be formed to analyze and to report conclusions to be drawn from the materials. Research assignments could be made asking students to find out more about a given country and to test conclusions drawn from the materials provided. [Fiji, for example, has been subject to serious ethnic clashes--leading to a military coup--between the native Fijian population and the large Indian population. The existence of this ethnic tension, and of other social problems, can be inferred from a careful reading of the newspapers. At the least, students will be disabused of stereotypical notions concerning idyllic tropical islands.] Research assignments might have the parallel objective of teaching students the value and limitations of newspapers as sources. Assignments might be followed up by asking students to perform a similar analysis of their own

hometown newspapers. What conclusions might a person from another culture draw about our society on the basis of our newspapers?

[For another example designed to promote critical thinking by asking students to review newspapers, see Ruggiero, p. 120.]

Example Two: Developing Sensitivity to Other Cultures in LIT 100, "Literature Appreciation":

In LIT 100, there are many opportunities to develop students' sensitivity to other cultures through reading and discussion of literary works written by authors who emerge from cultural and literary traditions other than those of the United States and the United Kingdom. For example, the question of "What is a culture and how does it affect an individual?" could be addressed by analysis of a collection of texts. Margaret Atwood (Canadian), Juan Jose Arreola (Mexican), Gabriel Garcia Marquez (Columbian), Ru Ahijuan (Chinese), and Henrick Ibsen (Norwegian) all effectively reflect the assumptions of their particular cultures. The question, "How do cultures interact?" might be addressed by reading a collection of texts including Conrad's Heart of Darkness, Atwood's "Dancing Girls," and selected Vietnamese and Latin American poems.

Example Three: Developing Sensitivity to Other Cultures in COM 100, "Essentials of Effective Communication":

A writer's voice is formed not only from the particular frame of reference of the individual but also from the experience and history of the writer's culture. Thus a multicultural goal of COM 100 could be for students to understand the term "writer's voice" as it relates to their own writing and to that of writers from other cultures. Students might be asked to compare and contrast the elements of a Latin American writer's voice (Perhaps that of Gabriel Garcia Marquez) with the elements of their own voice as a writer.

Example Four: Developing Sensitivity to Other Cultures in MHT 100, "Introduction to Mental Health":

Students are presented with five components of effective cross-cultural practice:

1. Awareness of the limitations of your own culture.

2. Openness to cultural differences.

3. Openness to learning from consumers of human services.

4. Using existing cultural resources.

5. Acknowledging cultural integrity.

Students are given a case in which a white social worker did not deal effectively with a Hispanic family. Students are asked to analyze and evaluate the worker's behavior on the basis of the principles that have been presented (Austin).

8. CONTENT AREAS

Some study within the content areas of the liberal arts & sciences is mandated through the distribution requirements of the various degree programs. In terms of the educational experiences of individual students, it is possible to debate the degree to which this learning is subject to design or to accident (as students could, for example, receive an A.A. without ever having studied any social science other than psychology, or might--to cite another example--fulfill their humanities distribution requirement by taking two COM courses and five ART courses). Be that as it may, all degree programs mandate at least a minimal experience of the disciplines of liberal learning as defined by the following familiar classification:

A. The Social Sciences (Anthropology, Economics, History, Political Science, Psychology, and Sociology)

B. The Humanities (Art, Communications, Drama, French, Humanities, Literature, Music, Philosophy, and Spanish)

C. The Natural Sciences (Biology, Chemistry, Earth Science, and Physics)

D. Mathematics

As have been previously indicated, the active competencies that general education seeks to develop are not exclusively developed in liberal arts & sciences courses. On the other hand, in terms of content, the liberal arts & science courses offer a body of knowledge that is central to the vision of an educated person that general education seeks to advance. The approach we have taken to general education places much weight on the disciplinary concerns and agendas of various areas within the liberal arts & science. For example, the pressing problem of scientific literacy has not been directly addressed, although it might well have been and perhaps should have been. We did not deal with this issue separately because the locus for dealing with it is clearly the science courses. Other examples could be cited. Furthermore, specific courses in the liberal arts & science disciplines have the function not only of communicating disciplinary knowledge, but of providing the contexts within

which the active competencies are to be developed. Critical thinking, for example, should be taught throughout the curriculum, as to think one needs something to think about.

Knowledge and understanding are obviously central to education, which seeks to move minds, from ignorance to knowledge, from powerlessness to power, from helpless mystification to understanding. If the active competencies define some of the ways in which minds move, the content areas are the places where this movement will occur.

Outcomes

Graduates will be capable of:

1. Demonstrating a knowledge of the content of the liberal arts & science disciplines.

   Content will be appropriate to lower-division courses in these fields. Expectations about student knowledge will be informed by an understanding of the distributional requirements in effect at the College.

   [Content knowledge will be assessed via course-specific assessment measures as well as via generally administered achievement tests.]

2. Demonstrating a knowledge of the characteristic concerns of the four principal families of disciplines included within the liberal arts & sciences: the humanities, the social sciences, the natural sciences, and mathematics.

VII. Curricular Recommendations

1) **Research:** A one-credit **library skills course** should be developed and consideration given to making this course a requirement of transfer degree programs. This course should give appropriate attention to academic research skills and to life-long learning skills.

As noted in the "General Education Competencies," above, we have identified an ability to acquire knowledge through research as a basic general education competency. As such, this competency should be developed through as many media as possible, including formal instruction in a library skills course and appropriate research assignments in general education and career and vocational courses.

As a library skills course is required under the general education plan in effect at SUNY Plattsburgh, we recommend that steps be taken to investigate whether the proposed NCCC course can be designed both to meet our institutional needs and to satisfy transfer requirements for students wishing to attend SUNY Plattsburgh under existing articulation agreements.

2) **Multiculturalism:**

a) Existing courses should be surveyed in order to identify appropriate opportunities to develop a multicultural perspective. For example,

--Literature courses might employ texts that include readings by authors from cultures other than those of America and western Europe;

--ART 100, "Art Appreciation," might include a segment emphasizing artistic traditions other than those of Western civilization;

--SOC 110, "Social Problems," might include an examination of ethnic groups within the United States as well as an examination of the social problems of the Third World.

--POS 101, "Introduction to Political Science," might include a segment devoted to the political characteristics and development of the new nations that emerged from the break up of the British and French Empires after World War II.

b) Existing courses that offer a cross-cultural perspective, such as ANT 100, "Cultural Anthropology," and PHI 110, "World Religions," should be scheduled as frequently as possible.

c) New courses designed to increase multicultural awareness should be developed. Possibilities for so doing exist in history and in literature. In particular, a literature course focusing on multicultural texts would be a valuable addition to the curriculum.

3) **Interdisciplinary and cross-disciplinary courses:** Consideration should be given to developing existing courses (such as HUM 101, "Art and Music of the Western World") so that their ability to draw connections across the disciplines is enhanced. Cooperation among the divisions and among disciplines within each division should be encouraged, so that students are aware of connections and more sensitive to what is shared within

the house of learning. New courses that exhibit in their design an appropriate rigor and concern to advance general education objectives should be welcomed.

VIII. Selection of Courses for Assessment

There are a number of practical concerns affecting the selection of courses for assessment, such as the time and effort required to design various assessment instruments for specific courses (revisions of course outlines, pre-tests and post-tests, etc.), and the time and effort needed collect and analyze the results. If attention is not paid to these practical concerns, entropy will occur relatively quickly.

There is no doubt that general education assessment places particularly demands on the Humanities /Social Science Division, due to the substantial number of courses needed to satisfy distribution requirements in the humanities and social sciences.

We need also to remember that assessment is a cross-campus phenomenon. We're not going to be assessing just the Saranac Lake courses or just the Malone or IHEP courses. This being the case, the actual scale of our operations should be considered, as most members of the College community have a day-to day site-specific focus and thus will not have internalized the realities.

The table below summarizes the distribution of Humanities and Social Science courses for the 1989-90 academic year. The table includes courses at all sites (the four campuses and the five IHEP sites). It excludes Early Admissions and summer courses. The number of sections offered each semester is listed, as well as the total number for the year. Courses are classified into two categories: those that were offered in multiple sections on at least one campus, and those that were offered no more than once in a semester at any single campus.

One of the uses of this table is to predict data volume. The College would be wise to quantify some of the realities in this way, as specific goals for generating assessment data are set.

1989-90 Course Frequencies: Humanities & Social Science

I. Courses Offered in Multiple Sections on One or More Campuses

(Sections)	Fall	Spring	Total
ANT 100	1	2	3
ART 150	2	1	3
(COM 100)	13	6	19

COM 101	15	14	29
(COM 106-108)	11	7	19
COM 102	1	4	5
COM 121	1	7	8
PSY 101	9	7	16
PSY 202	0	6	6
PSY 203	1	3	4
SOC 100	10	6	16
SOC 210	2	8	10

(N = 12; two of these are developmental)

II. Courses Offered at Least Once During 1989-90

ART 100	4	2	6
ART 101	3	1	4
ART 108	2	0	2
ART 111	0	4	4
ART 136	0	1	1
ART 142	0	1	1
ART 151	0	1	1
ART 178	0	1	1
ART 201	2	0	2
ART 202	0	1	1
ART 203	0	1	1
(COM 091)	1	0	1
COM 202	0	1	1
DRA 100	2	1	3
DRA 101	1	1	2
ECO 101	1	0	1
ECO 102	2	2	4
FRE 101	2	0	2
FRE 102	0	1	1
HIS 101	2	2	4
HIS 102	0	2	2
HIS 121	3	0	3
HIS 151	2	0	2
HIS 152	1	0	1
HUM 100	2	2	4
HUM 101	1	0	1
HUM 150	0	3	3

LIT 100	5	1	6
LIT 120	1	1	2
LIT 139	0	1	1
LIT 150	0	1	1
LIT 165	0	1	1
LIT 170	2	1	3
LIT 239	0	1	1
MUS 100	1	0	1
PHI 100	2	0	2
PHI 110	2	3	5
POS 101	1	1	2
POS 201	1	0	1
PSY 138	4	0	4
PSY 222	0	1	1
PSY 230	0	1	1
PSY 253	1	0	1
SOC 110	0	1	1
SPA 100	0	3	3
SPA 101	1	0	1
SPA 102	0	1	1

(N = 47)

Based on consideration of the above table, we recommend a two-track approach. If the general education assessment effort is to benefit as many students as possible, it would be desirable to identify competencies and develop tactics for explicitly developing them in relation to as many courses as possible, as quickly as possible. If a general pretest and posttest of general education competence and knowledge is administered, as we recommend, its existence would also argue for a concentrated effort to move through the existing curriculum, at least in terms of revising Course Outlines.

On the other hand, developing course-specific assessment instruments is a time-consuming proposition, and administering such instruments and collecting and evaluating the data are also time-consuming processes. A limited number of courses will have to be identified: the exact number and schedule should be subject to debate among all interested parties. We recommend that particular attention be given to courses where we get the most return for our effort (courses that are frequently scheduled), although the attention should not be exclusively directed toward that sector of the curriculum.

Therefore, Divisions should evaluate Course Outlines according to a schedule that allots reasonable time seriously to consider these documents, but the schedule for doing so should not be governed by the rate at which specific courses are actually subject to assessment.

IX. Five Year Time Line

The proposed five year time-line for implementation of the assessment plan recommends developing a schedule for modifying Course Outlines for existing courses. Course outlines for new courses developed within the five year period would include an assessment section.

YEAR ONE: 1989-1990

Recommendations for assessment of General Education have been developed and will be included within the College's Outcomes Assessment Plan.

YEAR TWO: 1990-1991

Schedules for revising Course Outlines and for assessing specific courses will be established.

Revision of Course Outlines will begin. Assessment sections will be added (see section IV, above).

A general test of general education knowledge and competencies will be identified, and the conditions under which it will be administered to entering and exiting students will be determined (see Section V, above). Testing of graduates will begin effective Spring 91.

Course-specific assessment will begin effective Spring 91.

YEAR THREE: 1991-1992

Fall 91: Testing of general education knowledge and competencies of incoming students will begin (see Section V, above).

Revision of Course Outlines and assessment of specific courses will continue.

YEAR FOUR: 1992-1993

Fall 92: a general review of progress in assessing general education competencies will be carried out.

Revision of Course Outlines and assessment of specific courses will continue.

YEAR FIVE: 1993-1994

Revision of Course Outlines and assessment of specific courses will continue. By Spring 94, all liberal arts & science Course Outlines will have been revised to include an assessment section.

X. Concerns Regarding Validity

Members of the task force wish to express some concerns about the assessment process as it applies to general education. In agreeing to serve on the task force, we have recognized the

necessity of assessing and the collateral benefits to be gained from the process. However, we are uneasy.

Without prejudging the results to be achieved, we think there is good reason to believe that it is not possible empirically to measure many of the general education competencies. A college is not a laboratory, and its students are not white mice. There is no control group. We cannot educate one group of students in one way and another group in another way for the purpose of empirically evaluating the relative success of various approaches to general education.

The differences in the quality of mind of college graduates, when compared to the quality of mind of high school graduates, are the effect of any number of primary, secondary, and tertiary causes. One of these is maturity: the holder of a B.A. or B.S. is at least four years older than he or she was upon graduation from high school; for a student who enters college directly after graduating from high school, these are crucial years developmentally.

While it is certainly possible to show that in various ways students have more effective minds when they graduate than when they enter, it is considerably less easy actually to prove causal connections to very specific educational acts. To the degree that assessment is connected to quantification--for pragmatic reasons if for no other--very specific educational acts are at issue. This leads to fears that we will 'teach to tests,' and so

on--although members are open to the possibility that this might not be an entirely bad thing in every case.

More fundamentally, in terms of a commitment to the truth, there is some fear that assessment of general education will inevitably over-simplify the actual cause and effect relationships, and that the nature and goals of liberal education may be defined reductively. Some disciplines within the liberal arts are based on the assumption that many important phenomena are not measurable, and that an acceptance of ambiguity and open-endedness is necessary to the proper understanding of many human issues and situations. The truth resides somewhere between the proposition that nothing of value can be measured and the idea that only that which can be measured has value. Neither end of this spectrum is worth serious consideration. Within the spectrum are many points of view; representatives of those points of view need to listen to each other.

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